WPS4499

Policy Research Working Paper 4499

Upgrading the Investment Policy Framework of Public Pension Funds

Dimitri Vittas
Gregorio Impavido
Ronan O'Connor

The World Bank
Financial Systems Department
Financial Policy Division
January 2008

Abstract

Public pension funds have the potential to benefit from low operating costs because they enjoy economies of scale and avoid large marketing costs. But this important advantage has in most countries been dissipated by poor investment performance. The latter has been attributed to a weak governance structure, lack of independence from government interference, and a low level of transparency and public accountability.

Recent years have witnessed the creation of new public pension funds in several countries, and the modernization of existing ones in others, with special emphasis placed on upgrading their investment policy framework and strengthening their governance structure. This paper focuses on the experience of four new public pension funds that have been created in Norway, Canada, Ireland and New Zealand.

The paper discusses the safeguards that have been introduced to ensure their independence and their insulation from political pressures. It also reviews their performance and their evolving investment strategies. All four funds started with the romantic idea of operating as 'managers of managers' and focusing on external passive management but their strategies have progressively evolved to embrace internal active management and significant investments in alternative asset classes. The paper draws lessons for other countries that wish to modernize their public pension funds.

This paper—a product of the Financial Policy Division, Financial Systems Department—is part of a larger effort in the department to study the investment performance of public and private pension funds. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The authors may be contacted at divttas@worldbank.org, gimpavido@imf.org, and roconnor@ntma.ie.

Financial Sector Development
World Bank

Upgrading the Investment Policy Framework of Public Pension Funds

Dimitri Vittas
Gregorio Impavido
Ronan O'Connor

Table of Contents*

Dimitri Vittas (dvittas@worldbank.org) is a World Bank consultant where he was formerly a Senior Adviser on Financial Sector Development. **Gregorio Impavido** (gimpavido@imf.org) is Senior Financial Sector Expert at the IMF. **Ronan O’Connor** (roconnor@ntma.ie) is Head of Risk and Asset Allocation for the Irish National Pensions Reserve Fund. The authors are grateful for insightful and helpful comments provided by Richard Hinz, Estelle James, Jeppe Ladekarl and Roberto Rocha. The usual disclaimer applies.

Executive Summary

Introduction: Public pension funds have the potential to benefit from low operating costs because they enjoy economies of scale and avoid large marketing costs. But this important advantage has in most countries been dissipated by poor investment performance. The latter has been attributed to a weak governance structure, lack of independence from government interference, and a low level of transparency and public accountability.

Recent years have witnessed the creation of new public pension funds in several countries, and the modernization of existing ones in others, with special emphasis placed on upgrading their investment policy framework and strengthening their governance structure. This paper focuses on the experience of four new public pension funds that have been created in Norway, Canada, Ireland and New Zealand.

Poor Investment Performance: With some notable exceptions[1], public pension funds were historically poorly managed in most countries. They were often forced to invest in government bonds and housing loans at low nominal interest rates, while investments in foreign assets were prohibited. In countries that suffered from high inflation, real investment returns were negative, while even in countries where nominal interest rates exceeded inflation, the returns on public pension reserves were well below equity market returns and well below the returns achieved by private pension funds.

In several countries public pension funds were even required to place all their accumulated reserves in non-marketable government securities, 'earning' an administered rate of return. This practice effectively transformed their assets into 'notional' reserves. As a result, the underlying pension plans were also effectively transformed from 'partially funded' to completely 'pay-as-you-go' schemes, relying on future payroll contributions and government tax revenues for the payment of pensions. In the case of these funds, the question of creating a sound and efficient investment policy framework did not arise.

A New Approach to Public Pension Fund Management: Faced with the growing financial pressures arising from changing demographics and the need to improve the investment performance of public pension funds, several countries around the world, mainly in the OECD, decided in the past 15 years or so to modernize the management of existing pension funds or to create new pension funds with substantial reserves to help finance the rising cost of public pensions. These countries included Norway, Canada, Ireland and New Zealand, all of which created new funds, transferred reserves, committed to make annual contributions, and promoted a modern framework for efficient investment performance.

[1] Historically the main exceptions were the Caisse de Dépôt et Placement du Québec (CDPQ) in Canada and CALPERS and the Thrift Savings Plan (TSP) in the US. In the period since 1990, several other public pension funds have been able to significantly improve their investment performance. These include the Ontario Teachers Pension Plan (OTPP) in Canada and, among European funds, the ABP in the Netherlands, the ATP in Denmark, and the other ATP in Sweden.

The four countries emphasized strong fund governance structures, independence from government (with one notable exception), and public accountability and transparency. The public pension funds have been given clear commercial mandates to invest their resources efficiently to maximize investment returns while assuming a prudent level of risk. All four funds have a long investment horizon and have adequate resources to justify the creation of the new investment policy framework.

Institutional Structure and Fund Governance: New separate state entities with their own boards of directors have been created in three of the four countries (Canada, Ireland and New Zealand). The boards of directors are responsible for formulating the investment policies of the funds, setting the strategic asset allocations, and supervising management. All three entities have small boards of experts rather than representatives of stakeholders to ensure greater effectiveness. Directors are appointed for fixed terms that are staggered to ensure continuity and can only be removed for just cause. The boards have adopted corporate governance and conflict of interest guidelines and have set up audit committees to ensure the effectiveness of internal control systems.

In Norway, the new public fund has not been set up as an independent legal entity but as a government account with the central bank. Responsibility for managing the fund is vested in the Ministry of Finance, which makes all strategic decisions, formulates investment policy objectives, and sets the strategic asset allocation and benchmarks. As a result, the Norwegian fund does not enjoy formal independence from government. However, there are fiscal rules that limit use of the fund for short-term purposes, while the strategic asset allocation is subject to parliamentary approval.

Public accountability of the four funds is buttressed by regular independent reviews of their performance as well as special examinations that may be commissioned by the government. All the funds are required to submit reports to the government and give evidence to parliamentary committees.

Executive Management: Two of the funds, the CPPIB and the NZSF, have appointed internal chief executives who are responsible for managing the funds. In Ireland, the National Treasury Management Agency (NTMA) was appointed as the first executive manager for a period of 10 years. These three funds started their operations with small executive teams, mainly because the plan was for them to engage in passive indexed management and outsource active asset management to external specialists.

In Norway, Norges Bank (the central bank of Norway) was selected as the operational manager of the public fund. The Bank is supervised by the Ministry. It created a special unit, Norges Bank Investment Management (NBIM), to manage the assets of the fund.

All four funds have placed special emphasis on monitoring and controlling both financial and operational risks. They have installed comprehensive information systems and developed detailed control procedures. They have all separated investment decision making from back-office operations, including record keeping, settlement, and performance measurement. They have each installed sophisticated systems to measure the performance of external asset managers.

Investment Policy Objectives and Strategic Asset Allocation: In Canada, Ireland and New Zealand, the formulation of investment policy and the determination of strategic asset allocation are the responsibility of the boards of directors of the three funds. In contrast, in Norway this responsibility is vested in the Ministry of Finance. All funds have relied on external advisers for setting their first strategic asset allocation policies. Asset allocation strategies have been subject to regular reviews and revisions, entailing significant shifts in emphasis and orientation.

The asset allocation strategies have reflected their long investment horizon and their operation as final wealth maximization units, free for a long period of time from the requirement to match assets and liabilities. They have been based on the historical level and volatility of returns on eligible instruments, but they have also been influenced by the perceived level of risk tolerance of their stakeholders.

All the funds started by emphasizing passive management through external asset managers. However, this concept was relatively quickly expanded to include active management, the use of customized indexing to limit excessive exposure to index-dominating companies and permit investments in smaller companies. This implied the development of internal management capabilities, first in passive management and progressively also in active management. Except for Norway, the approach was later expanded further to encompass investments in several alternative asset classes, including private equity, real estate and infrastructure projects as well as emerging markets. In the case of Canada, this has even included the taking of principal positions in individual corporations and participating actively in cooperation with private equity funds in hostile takeovers of leading entities in the domestic and international markets (principal investing). It also included the development of short-term trading capabilities. In all cases, investments in hedge funds and derivative instruments have also been authorized.

These developments are a far cry from the original idea of passive investment in indexed instruments and the concept of public pension funds as ‘managers of managers’. The departure from that ideal has been justified by the need to enhance the investment performance of the fund. In the case of Canada, it has been argued that the new approach is necessary to obviate the need for a future increase in contributions or a reduction in benefits.

This evolution of the strategic asset allocations of the four public pension funds has reflected the growing trend over the past decade or so among large university endowment funds, charitable foundations, and corporate pension funds to diversify out of investments in listed equities and bonds and seek higher returns in alternative asset classes, including private equity, real estate, hedge funds, and emerging markets. However, some aspects of this approach should raise policy concerns, with regard to asset valuation and exposure to managerial and ‘principal investing’ risks.

Implementation of Investment Strategy: Implementation of the investment strategy is the responsibility of executive management. However, the decision regarding the relative reliance on passive and active management and the use of internal and external managers as well as the selection of external managers require board approval. Executive management is fully responsible for monitoring the performance of both internal and external managers and for reporting to the board. Executive management also plays an important advisory role and is often the driving force for important changes in investment strategy.

Implementation of investment strategy involved the selection and appointment of global custodians, transition managers and external asset managers. In all cases, clear technical criteria were established for the selection of external service providers and a transparent process was utilized to ensure objectivity and avoidance of conflicts of interest. Global custodians were selected to secure the legal segregation and safe custody of assets and to facilitate a more efficient monitoring of the performance of external asset managers. Transition managers were retained to assist in investing large amounts of cash in domestic and foreign markets with minimal market impact.

The number of retained external managers and the number of mandates has increased dramatically over time in all cases following the expansion of investments in private equity, real estate and infrastructure projects. Initially external managers were specializing in passive indexing but over time the emphasis has shifted to asset managers specializing in particular sectors, regions, or strategies.

Investment Performance: All four pension funds have achieved positive investment results with excess returns over their respective benchmarks. However, equity returns have been adversely affected by the bursting of the high tech bubble in 2000 and the fall in equity prices in 2001 and 2002. Operating expenses have generally been low, although the growing emphasis on alternative asset classes has implied a significant increase with the passage of time.

In Conclusion: In conclusion, despite the clear and significant departure from the original concept of external passive management, the experience of the four public funds has been positive. Governance and public accountability are strong in all countries. Their example has already been followed in several other OECD countries and is likely to be copied in a growing number of developing countries where public pension funds continue to play an important role. However, care needs to be taken to ensure that the more active approach to management and the emphasis on alternative asset classes do not cause a derailment of the fundamental objective of these funds, which is to help finance the anticipated large increase in public pension outlays over the next 20 to 50 years. As the investment horizon of these funds becomes shorter, asset allocation strategies would need to be adjusted to favor more liquid instruments that are easier to value.

1. Introduction and Summary of Findings

1.1 Introduction

Public pension funds operate in many countries with very small reserves, covering pension payments for up to one year ahead. However, there is also a large number of both high income and developing countries where public pension schemes are partially funded and have accumulated significant reserves.

In general, public pension funds have the potential to benefit from low operating costs because they enjoy economies of scale and avoid large marketing costs. But this important advantage is often dissipated by a poor record on investment performance, caused by a weak governance structure, lack of independence from government interference, and a low level of transparency and public accountability.

Historically, public pension funds were managed poorly in most countries. They were forced to invest in government bonds and housing loans at low nominal interest rates, while investments in foreign assets were prohibited. In countries that suffered from high inflation, real investment returns were negative, while even in countries where nominal interest rates exceeded inflation, the returns on public pension reserves were well below equity market returns and well below the returns achieved by private pension funds.[2]

Recognizing the poor track record of public pension funds and the need to build pension reserves to meet the growing demographic pressures on public pension schemes, several OECD countries have in recent years revamped the governance structure and investment management of their public pension funds or have created new funds that have benefited from a strong governance structure, independence from government, and a high level of transparency and public accountability.

This paper reviews the experience of four such OECD countries: Norway, Canada, Ireland and New Zealand. The paper is divided into 5 chapters. Chapters 2 to 5 discuss in some detail the experience of public pension funds in each of these four countries, reflecting the order in which they were set up. This first chapter provides an overview and summary of findings. After a brief synopsis of the past record of the investment performance of public pension funds, the chapter discusses the creation of new public pension funds, and then reviews their structure and performance in terms of their objectives, funding sources, institutional structure and fund governance, executive management, formulation of investment policy objectives and determination of strategic asset allocation, implementation of investment strategy and, last but by no means least, investment performance. The chapter ends with some concluding remarks and a brief summary of the main lessons for both high income and developing countries that may wish to create similarly organized public pension funds.

[2] The poor performance of public pension funds has been documented in many studies. For a summary overview, see World Bank (1994), while for more detailed studies of public pension fund governance and performance see Mitchell and Hsin (1997), Iglesias and Palacios (2000), Useem and Mitchell (2000), Hess and Impavido (2004), and Impavido (2002 and 2007).

1.2 Past Record of Investment Performance of Public Pension Funds

The past record of the investment performance of public sector pension funds ranged from mediocre to disastrous and was far poorer than the record of private pension funds. Public pension funds that achieved a mediocre level of performance included, among others, the ATP (Allmänna TilläggsPensionen) fund in Sweden for the period before the early 1990s, the Social Security Corporation (SSC) of Jordan, the National Pensions Fund (NPF) of Mauritius and the Fiji National Provident Fund (FNPF). These funds underperformed financial markets because they invested heavily in marketable government bonds and did not benefit from the higher returns that were available on corporate equities and bonds or foreign assets. Their record was mediocre rather than disastrous since government bonds in these countries paid a positive rate of interest in real terms.

The Swedish ATP underperformed financial markets in the period before financial liberalization in Sweden in the early 1990s as a result of a requirement to invest a large part of its resources in bonds issued by mortgage credit institutions at below market levels. This was part of government policy to support the development of the housing market but it did affect the returns of ATP. Over the past 15 years or so ATP has enjoyed considerable investment policy autonomy and has diversified heavily into domestic and foreign equities.

In contrast, social security institutions in several Latin American countries in the 1970s and 1980s as well as in sub-Saharan African countries suffered heavy losses in their holdings of government bonds and housing loans, mainly because these instruments paid fixed nominal rates of interest at a time when inflation spiraled out of control and they also suffered from high levels of non-repayment (World Bank 1994, Iglesias and Palacios 2000). Social security institutions in Argentina, Bolivia, Costa Rica, Ecuador, Guatemala, Peru and Venezuela in Latin America effectively lost all their reserves in highly inflationary times. The same fate was met by national provident funds in Ghana, Kenya, Nigeria, Tanzania, Uganda and Zambia in Africa.

Historically, there have been some notable exceptions to the generally poor investment record of public pension funds. In the US, the best known examples are CALPERS, the fund that covers employees of local government in California, and the Thrift Savings Plan (TSP), which covers employees of the federal government. CALPERS is a defined benefit plan, while TSP is a defined contribution plan, but they have both adopted sophisticated and market-based investment policies.[3]

In Canada, the Caisse de Dépôt et Placement du Québec (CDPQ) has operated since its inception in the mid-1960s as the investment manager of the reserves of the provincial pension plan. It has also managed other public funds originating from various sources.

---

[3] The TSP offers to participating employees a range of indexed funds that can be selected directly or as part of lifecycle funds. Investment fees are less than 2 basis points over all funds, while total operating costs, including the investment fees, are less than 6 basis points.

The CDPQ has invested its assets in equities and debt securities in Quebec as well as outside Quebec and in overseas markets to the extent permitted by foreign exchange control rules. It has earned market-based investment returns. The Ontario Teachers Pension Plan (OTPP) is another Canadian public pension fund that has implemented well-diversified and efficient investment policies. OTPP used to be required to place all its reserves in non-marketable provincial government bonds but the restriction was removed in 1990 and since then OTPP has been a world leader in applying innovative techniques in asset management.

In Europe, two public pension institutions that have long invested in marketable securities, including corporate equities and derivatives, are the ABP in the Netherlands and the ATP in Denmark. The ABP (Algemeen Burgerlijk Pensioenfonds) is a defined benefit plan for Dutch civil servants, while the Danish ATP (Arbejdmarkedets TillaegsPension - Labor Market Supplementary Pension) is a mandatory defined-contribution supplementary pension scheme covering all Danish workers.[4] Despite being in the public sector, these institutions, like their Canadian counterparts, have long played a leading role in adopting innovative investment policies and have had an enviable record of high operating efficiency and investment returns.

1.3 The Record of Pension Institutions with 'Notional' Reserves

There are also public pension funds in several countries that have been required to place all their accumulated reserves in non-marketable government securities and have earned an administered rate of return. This practice has effectively transformed these institutions from 'partially funded' into completely 'pay-as-you-go' schemes, relying on future contributions and government tax revenues for the payment of pensions. At least, if they hold marketable government securities, they can start a diversification program out of government bonds into corporate or even foreign securities.[5] When they hold 'non-marketable' debt they must first replace it with marketable instruments and this will depend on the ability of the government to recognize this debt.

Notable examples of this practice include the United States, Cyprus and Egypt. In the United States, the Social Security Trust Fund has accumulated reserves exceeding 2 trillion US dollars and representing more than 15 percent of GDP. The rate of remuneration has equaled the average yield of US government securities. In Cyprus, the Social Insurance Fund (SIF) has accumulated reserves corresponding to 36 percent of GDP, while the administered rate of interest has been set equal to 50 basis points below the Lombard rate, i.e. the rate at which the central bank lends to commercial banks. The

[4] The Danish ATP fund is a long-established public pension fund that has recently modernized its investment framework. Vittas (2007) discusses briefly the investment policies of ATP, the evolution of its contributions and benefits, and its risk-sharing arrangements.

[5] This option is available to the Fiji National Provident Fund, which has assets equivalent to 65 percent of GDP and invests heavily in government bonds. However, its ability to diversify out of government bonds into other domestic securities or foreign assets is heavily constrained by the adverse impact that such action is likely to have on government finances and foreign exchange reserves. This implies that even holding marketable government securities may result, under some circumstances, in transforming pension fund assets into 'notional' reserves.

SIF rate has been half way between the interest rate of 13-week Treasury bills and the yield on 10-year government bonds.

In Egypt, the social security institutions have accumulated reserves between 30 and 50 percent of GDP over the past two decades. The administered rate of interest was initially fixed at a low level. As a result of high and volatile inflation, the institutions 'earned' a negative real rate of return of minus 11.7 percent between 1981 and 1989 (World Bank 1994:128). During the 1990s, the nominal rate of interest was raised to market levels and, with inflation falling to single digits, the social security institutions 'earned' positive annual real rates of return of more than 5 percent.[6] The problem in Egypt was that the deficit was then transferred to the National Investment Bank, which had advanced the funds to public projects and institutions of various types and had never earned the high returns that were required to be able to sustain the very high rate of interest it was crediting to the balances of the Social Security Institutions. The Egyptian authorities recognized in the end the non-existence of this 'notional' fund and decided in 2005 to implement over the ensuing years a radical systemic reform of the pension system.

When public pension funds are required to place all their reserves in non-tradable government securities, the question of designing an efficient investment policy framework does not arise. The administered rate of return may (and often does) become a bone of contention but all other aspects of sound investment policy from adopting a strategic asset allocation to ensuring the safe custody of assets become moot.

In the terms of the ensuing discussion on fund governance, the main weakness of funds like the SSTF in the US, the SIF in Cyprus or the social security institutions in Egypt has been the failure to ensure the legal segregation of their accumulated assets from the rest of the government budget. Three important policy questions arise when the social security funds are invested in non-tradable government debt (see box). However, for the purpose of this paper, it suffices to note that since the reserves are then 'notional', there is no need for the creation of an investment policy framework.

[6] Robalino (2005:150-152) documents the rise in the rate of interest paid by the NIB in the second half of the 1990s and beyond.

Box 1: Are Social Security Reserves ‘Notional’ or ‘Real’?

Three important questions arise when the reserves of public pension funds are entirely or predominantly invested in government debt, whether in tradable or non-tradable form. What is the nature of the reserves? What is the nature of the flow of administered income? And, what is the rationale for setting payroll contributions at a rate that is significantly higher than the level required for financing current benefit payments?

The answers to these questions depend on whether the public pension fund is part of general government or not. As regards the nature of the reserves, if the pension fund is part of general government, then its holdings of government debt are excluded from the definition of public debt since they are consolidated in the general government accounts. The reserves are therefore ‘notional’ and only represent an accounting entry: they cannot be used to finance the expenses of the fund. In fact, the government will need to increase its borrowing (or raise taxes) to meet any cashflow needs of the fund, making it functionally equivalent to a 'pay-as-you-go' pension scheme. In contrast, when the public pension fund is established as a public entity outside general government, its holdings of government securities are counted as part of public debt and the reserves are ‘real’. Of course, being ‘real’ does not mean that such reserves can be readily realized to meet fund requirements – this depends on whether the securities are tradable and the liquidity of the secondary market on which they are traded.

As regards the second question, income on the reserves is an internal accounting entry that cancels out in the consolidated general government accounts if the public pension fund is part of general government,. The level of the income does not affect the liquidity position of the institution unless the government intends and is able to create at some point in the future a segregated fund with effective reserves. In such a case, the level of the administered rate would determine the size of the reserves and the transfer of resources[7] that would be required. But if the government is subject to fiscal constraints, the liquidity of the public pension fund would rely on current transfers from the budget. If the public pension fund is established outside general government, interest on its holdings of public debt will count as interest expenditure on the consolidated general government accounts.

The answer to the third question is more contentious. If a high payroll tax is not linked to the immediate creation of an ‘effective’ reserve that is totally segregated from the government budget and is invested in marketable assets, the imposition of a high payroll tax is a regressive form of taxation that is a burden on low and middle income workers and weakens the degree of progressivity of personal income taxation. The underlying rationale is political rather than financial.

1.4 Creation and Objectives of New Public Pension Funds

Faced with growing financial pressures arising from changing demographics, several countries around the world decided in the past 15 years or so to modernize existing pension funds or to create new public pension funds with substantial reserves to help finance the rising cost of public pensions. Japan, Korea and Sweden have taken steps to remove or relax existing restrictions on the investment policies of their public pension funds. Other countries that have long operated completely unfunded or very lightly funded public pension schemes have created new public pension funds. Recent initiatives have been taken in such diverse countries as Australia, Canada, France, Ireland, New Zealand and Norway.

These public pension funds joined the ranks of some pre-existing public pension funds and several government investment institutions that have been created in Arab oil-

[7] For instance, the Stability and Growth Pact of the European Union places limits on annual fiscal deficits and net levels of government debt on EU countries that participate in the Euro zone.

exporting countries, such as Abu Dhabi, Bahrain, Dubai, Kuwait, Qatar and Saudi Arabia, as well as in China, Russia and Singapore. They are therefore part of a broader international trend. This paper focuses on the experience of recently created public pension funds in four OECD countries: Norway, Canada, Ireland and New Zealand. All created new funds, transferred reserves, committed to make annual contributions, and promoted a modern framework for efficient investment performance.[8]

Norway was the first of these countries to establish a new public fund. It created the Government Petroleum Fund in 1990 in order to invest in overseas markets the part of oil revenues (net of oil-related investments) that the authorities decided to save for the benefit of future generations. The Petroleum Fund was not initially formally set up as a pension fund although it was from the start expected to play an important part in meeting future demands on state pension expenditures. But in January 2006, the link was formally recognized and the Government Petroleum Fund was officially renamed the Government Pension Fund - Global (GPFG), reflecting the global orientation of its investments. There is also a Government Pension Fund - Norway, which manages the domestic, and much smaller, assets of the National Insurance Fund.

Norway followed the precedent created by Kuwait in the late 1970s, when it established the Kuwait Investment Office (KIO) with a remit to invest in overseas markets its fast accumulating foreign exchange reserves. In Norway the creation of the Petroleum Fund was motivated by the decision to preserve assets for future generations and avoid the Dutch disease effects that would likely ensue from immediate spending of the oil wealth. In some sense, Norway also followed the example of Singapore, which was able to accumulate large foreign exchange reserves in the 1970s as a result of the success of its export-led economic policies. The Singaporean authorities decided in the late 1970s to create the Government of Singapore Investment Corporation (GSIC) with the objective to diversify the investment of foreign reserves away from holding low-yielding US treasury bills and into high-return global equities as well as direct investment projects in various parts of the world.

A fundamental difference between the Norwegian fund and those of Kuwait and Singapore relates to transparency and public accountability. While the operations of KIO and GSIC have suffered from severe opacity, the Norwegian fund is required to operate with a very high level of transparency and accountability. The Ministry of Finance reports to Parliament on the performance of the fund. In addition, Norges Bank, which is responsible for managing the fund, holds press conferences every quarter on investment results and posts on its website comprehensive reports on its performance.

The creation of new public pension funds in the other three countries (Canada, Ireland and New Zealand) was specifically linked to the need to finance the anticipated large rise in pension outlays over the next 20 to 50 years. The Canada Pension Plan Investment

[8] The analysis of the experience of the four pension funds is based on the annual reports produced by the four institutions (Norges Bank and NBIM 1999-2006, CPPIB 1999-2007, NPRF 2001-2006 and NZSF 2003-2006) as well as various presentations by government officials (Kjaer 2004, Maher 2004, MacNaughton 2004, and McCulloch and Frances 2004).

Board (CPPIB) was created in 1997 as part of a package of measures that aimed to prevent the insolvency of the CPP in 2015. A major change was the acceleration in the projected increase in the contribution rate from 6 percent in 1997 to 9.9 percent in 2002. This was expected to generate significant reserves and the CPPIB was established to ensure their efficient management. The CPPIB objective is to accumulate reserves equal to 20 percent or more of the actuarial pension liabilities of the CPP.

In Ireland, the National Pensions Reserve Fund (NPRF) was created in 2000 to manage assets to meet the growing financial pressures of anticipated adverse demographic developments. The fund is designed to underpin the long-term sustainability of existing pension arrangements by accumulating reserves that would cover about one-third of the cost of public pensions (social welfare and public service) between 2025 and 2055 and possibly beyond.

The New Zealand Superannuation Fund (NZSF) was established in October 2001 with the aim of partially funding the universal public pension that is paid to all old-age persons residing in New Zealand. The accumulation of the fund and its use during the payout phase will offset the steep increase in the cost of the universal pension, particularly after 2020. The fund will thus smooth out the financial burden on the budget from the impact of demographic aging on the universal pension scheme.

In three of these countries (Ireland, New Zealand and Norway), the level of public debt is very low, ranging between 12 and 20 percent of GDP. As a result, the authorities did not face a difficult policy dilemma in deciding to create a new public pension fund. Creating a fund and investing in global assets was likely to earn a higher rate of return than the cost of public debt. In contrast, Canada has a higher level of public debt, amounting to 35 percent of GDP for federal government and another 25 percent of the provincial governments. The new fund was created to forestall the financial insolvency of the CPP. It is to be funded by the projected annual surpluses of the CPP, following the substantial increase in the contribution rate.

However, all four pension funds have similar objectives. They all aim to invest their resources efficiently to maximize investment returns while assuming a prudent level of risk. All four funds have a long investment horizon. No withdrawals from these funds are expected for at least the first 20 years of their existence and perhaps much longer. This has major implications for the formulation of investment policy objectives and the setting of their asset allocation strategies.

1.5 Funding Sources

The sources of funding are different in each of these countries. Norway transfers to the GPFG the net oil revenues that are saved for future generations. Although the Fund was created in 1990, no transfers took place in the first half of the 1990s because of low net oil income and large oil-related investments. The first transfer was made in May 1996. Since then, annual transfers have been quite sizable, exceeding on several occasions 10 percent of GDP, as both oil production and the price of oil increased rapidly, while oil-related investments declined.

Norway adopted in 2001 the so-called 4-percent fiscal rule. This limits the non-oil government budget deficit to 4 percent of the value of the accumulated fund, i.e. the expected real rate of return on fund assets. Taking into account the investment income generated by its assets, the size of the fund has grown at a rapid pace both in absolute terms and as proportion of GDP. The fund accumulated assets equal to 1,784 billion NOK in 2006, equivalent to about 285 billion USD (216 billion EUR) or 83 percent of GDP. The assets of the Government Pension Fund - Norway amounted in 2006 to 107 billion NOK or 5 percent of GDP. Thus, in total, the Government Pension Fund had assets corresponding to 88 percent of GDP.

The CPPIB was created in December 1997 but received the first transfer of funds in March 1999. The Board receives all cash flows that are not required by the CPP to pay current pensions and also retains all investment income generated from its operations. The annual operating surplus of the CPP grew substantially following the increase in contribution rates. The CPPIB also received the proceeds of redeemed federal and provincial government bonds that the CPP used to hold before 1998. The total assets of the CPP amounted to 117 billion CAD in March 2007. They rose from 4.5 percent of GDP in 2000 to 8.1 percent in 2007.

The Irish NPRF is funded with annual government contributions equal to 1 percent of GNP, possibly supplemented by privatization proceeds. The NPRF was created in 2000 but the first transfer of funds was made in April 2001. It included 6.5 billion EUR that had been accumulated in a temporary holding fund since 1999, pending the creation of the NPRF. This included the proceeds from the privatization of the State's Telecom company. Total assets reached 18.9 billion EUR at the end of 2006, corresponding to 12.6 percent of GNP (or 10.8 percent of GDP).

The NZSF is funded by annual government contributions. These vary from year to year and depend on a formula that calculates annually the required contribution for meeting the financial objective of the fund. The annual contribution reached 1.5 percent of GDP in 2006, when total assets amounted to 6.3 percent of GDP. The first transfer of contributions was made in October 2003, two years after the creation of the NZSF. The first transfer included funds that had been set aside in fiscal year 2002 and 2003 in anticipation of the creation of the fund.

With the exception of the Norwegian fund which is already very large but is required to invest in overseas markets, all the other funds are small relative to the size of the national economy. Their assets range between 6 and 11 percent of GDP. Although their assets are expected to grow significantly, the pension funds will not become dominant players in the local financial systems, which comprise large banks, insurance companies, and other public and private pension funds. This has important implications for avoiding excessive concentration of financial power in public institutions and for minimizing pressures from local interests for investment policies that are biased toward the home markets.

1.6 Institutional Structure and Fund Governance

New separate state entities with their own boards of directors have been created in three of the four countries (Canada, Ireland and New Zealand). The boards of directors (commissioners in the case of Ireland, guardians in the case of New Zealand) are responsible for formulating the investment policies of the funds, setting the strategic asset allocations, and supervising management. All three entities have small boards of experts rather than representatives of stakeholders: 6 in New Zealand, 7 in Ireland, and 12 in Canada. This structure contributes to greater effectiveness.

In Canada and New Zealand, a two-stage process was followed in appointing directors. First, an independent nominating committee was created. This consisted of private sector executives with relevant experience in New Zealand, while the Canadian nominating committee included both business executives and government officials, with a private sector executive in the chair. The nominating committees were required to identify and recommend individuals with the requisite expertise. The governments then made appointments from the short lists prepared by the nominating committees. In Ireland, the government is required to appoint as commissioners individuals with appropriate professional expertise.

The relevant acts in the three countries do not specify director qualifications in precise terms. In Ireland, commissioners must have acquired substantial expertise and experience at a senior level in a broad range of areas, including investment or international business management, finance or economics, law, actuarial practice, accountancy and auditing, civil service, trade union representation, pension industry, and consumer protection. In Canada, a sufficient number of directors must have proven financial ability or relevant work experience. In New Zealand, board members must have substantial experience, training and expertise in the management of financial investments. These specifications ensure that directors are experienced professionals. They do not, however, ensure that they have adequate knowledge of modern financial instruments and strategies whose complexity grows at a very rapid pace. However, this is an issue that affects the boards of directors of all types of entities, private corporations as well as public sector bodies, not just public pension funds.

Directors are appointed for fixed terms that are staggered to ensure continuity. Directors can only be removed for just cause. The first appointments of some directors were for shorter terms to enable the staggering of board service. The boards of directors operate with strong governance structures. Their operations are based on two important principles: independence from government and other interests, especially in making investment decisions; and full public accountability.[9] They all have been given commercial mandates subject to the ‘prudent person’ rule.

[9] In New Zealand, the minister of finance has the power under the law to issue directions to the governing board of the public pension fund. However, these must be in writing, must be presented to Parliament, and must be published in the official gazette. No direction has been issued up to now.

In general, the boards of directors of these three funds have adopted corporate governance and conflict of interest guidelines and have set up Audit Committees to ensure the effectiveness of internal control systems. They have appointed auditors and global custodians and adopted appropriate asset segregation and valuation rules. They have also made considerable use of external advisers on a wide variety of topics, ranging from advice on asset allocation strategies to the selection of external asset managers and the adoption of sophisticated information systems.

In Norway, the fund has not been set up as an independent legal entity but as a government account with the central bank. The fund itself has no rights or obligations against private sector entities or public authorities and may not institute, or be subject to, legal proceedings. Responsibility for managing the fund is vested in the Ministry of Finance, which makes all strategic decisions, formulates investment policy objectives, and sets the strategic asset allocation and benchmarks. However, an Advisory Council on Investment Strategy has also been appointed. The voting rights of the fund are exercised by its operational manager.

The Norwegian GPFG does not enjoy formal independence from government. Apart from the 4-percent fiscal rule, no other special measures have been adopted to insulate the fund from political interference. The fiscal rule limiting the use of accumulated balances is set by the government and must be approved by Parliament. The strategic asset allocation is also subject to parliamentary approval. But, as already noted above, the fund is required to operate with a very high level of transparency and public accountability. Moreover, the various features of strong corporate governance, such as asset segregation, valuation rules and effective internal controls, are all observed at the level of the operational manager (see below).

Public accountability of the four funds is buttressed by regular independent reviews of their performance as well as special examinations that may be commissioned by the ministers of finance. All the funds are required to submit reports to the government and give evidence to parliamentary committees.

All four funds have endorsed the Principles of Responsible Investing that have been sponsored by the United Nations. The aim of the principles is to integrate consideration of environmental, social and governance issues into investment decision-making and ownership practices and thereby improve long-term returns. In addition, all four funds have adopted clear guidelines on the proper exercise of their rights as shareholders in local and foreign corporations. In general, the funds favor the development of corporate governance policies that promote transparency and respect the rights of shareholders.

1.7 Executive Management

Two of the funds, the CPPIB and the NZSF, have appointed internal chief executives who are responsible for managing the funds. In Canada, board directors cannot be appointed officers of the CPPIB and officers cannot serve as directors. The positions of Board Chair and Chief Executive Officer are separate. The Chair is responsible for leading the Board of Directors and the CEO for leading management. The same pattern applies in New Zealand.

In Ireland, the NPRF Commission has the right to appoint the manager of the fund in consultation and with the consent of the Minister of Finance. But the National Treasury Management Agency (NTMA) was appointed under the National Pensions Reserve Fund Act, 2000 as the first executive manager of the fund for a period of 10 years.

The Chief Executive of the NTMA is an ex officio member of the Commission. The NTMA is responsible for managing the public debt of Ireland. Debt management agencies are created with the objective of minimizing the total cost of public debt subject to a prudent level of risk. It is thus a natural choice to manage the assets of the NPRF with the objective of maximizing the investment return subject to a prudent level of risk. Since the NPRF is not allowed to invest in Irish government securities, there is no direct conflict of interest between these major functions of the NTMA.[10]

The three funds started their operations with small executive teams, mainly because the plan was to engage in passive indexed management and outsource asset management to external specialists. The CPPIB started with a staff of 15, and the NTMA and NZSF with less than 10. However, the CPPIB has undergone an extensive change in its investment orientation and has engaged not only in internal active management but also in principal investing and short-term trading. As a result, the total number of staff expanded substantially each year and reached 271 in March 2007. The NTMA employed 17 officers to cover the operations of the NPRF in 2006 and the NZSF had 15 people in June 2006, but was planning to increase its staff to 25 in the current year.

In Norway, the Ministry of Finance selected Norges Bank (the central bank of Norway) as the operational manager of the GPFG. The assignment is open-ended and is subject to a one-year period of notice of termination by either party. The Ministry supervises the operations of the bank and uses independent consultants to evaluate its performance. Norges Bank offers investment advice to the Ministry on most aspects of the operations of the fund but especially on investment policies and asset allocation strategies.

Norges Bank created a special unit, Norges Bank Investment Management (NBIM), to manage the assets of the fund. Prior to the creation of this specialized unit, the Market Operations Department was dealing with the management of foreign exchange reserves. However, the bank felt that the investment experience gained from managing the foreign exchange reserves did not provide an adequate foundation for efficient management of the much larger and longer-term resources of the GPFG. NBIM was created by transferring some employees from other departments of the Bank, but most staff was hired through external recruitment. NBIM had 41 staff at the end of 1998. This grew to 79 by 1999 and reached 128 staff at the end of 2006. Some employees are based in the

[10] When investments in infrastructure projects are considered, proper Chinese walls are put in place between the managers of the NPRF and the managers of infrastructure projects.

London and New York offices of NBIM. Remuneration is on a separate scale and reflects international competitive levels.[11]

All four funds have placed special emphasis on monitoring and controlling both financial (market) and operational risks. They have installed comprehensive information systems and developed detailed control procedures. They have all separated investment decision making from back-office operations, including record keeping, settlement, and performance measurement. They have also installed sophisticated systems to measure the performance of external asset managers.

1.8 Investment Policy Objectives and Strategic Asset Allocation

In Canada, Ireland and New Zealand, the formulation of investment policy and the determination of strategic asset allocation are the responsibility of the boards of directors of the three funds. In contrast, in Norway this responsibility is vested in the Ministry of Finance. All funds have relied on external advisers for setting their first strategic asset allocation policies. Asset allocation strategies have been subject to regular reviews and revisions, entailing significant shifts in emphasis and orientation.

The asset allocation strategies have reflected their long investment horizon and their operation as final wealth maximization units, free for a long period of time from the requirement to match assets and liabilities. They have been based on the historical level and volatility of returns on eligible instruments, but they have also been influenced by the perceived level of risk tolerance of their stakeholders.

The last factor may explain why the Norwegian fund was initially entirely invested in fixed-income securities and only in 1997, after two parliamentary debates, the ministry decided to change the strategic asset allocation to 60 percent bonds and 40 percent equities. It may also explain why despite having the largest relative size of all the funds under review and also the longest investment horizon, the GPFG continues to use a much more conservative asset allocation than the other three funds.

However, the Norwegian authorities announced in late 2006 their intention to increase the equity allocation to 60 percent and to expand the universe of eligible investments by including small listed companies and possibly also real estate and infrastructure investments. The asset allocation excludes investments in Norwegian equities because the local market represents less than 0.2 percent of the global equity market and the fund

[11] NBIM observes all the requirements of good corporate governance. It established from the start proper procedures to separate investment decisions from back-office operations, including record keeping, settlement, and risk and return measurement. The assets of the GFPG are segregated from the other assets of the central bank and are reported separately in the bank's balance sheet as a government account. Proper custodial arrangements have been put in place for the safe custody of assets, securities are marked to market on a continuous basis, and both risk and return measurements are closely monitored and assessed. An internal audit department has been created and is required to report to the Audit Committee of the executive board of Norges Bank.

would be too large for the local market.[12] The much smaller Government Pension Fund - Norway invests in local bonds and equities.

The other three funds have followed very similar approaches in setting and subsequently revising their asset allocation strategies. The CPPIB took into account the inherited bond portfolio of the CPP and thus its initial allocation favored equity investments. In Ireland and New Zealand, the asset allocation strategies, which were prepared with advice from the same firm of international investment consultants, targeted a broad allocation of 80 percent equities (growth assets) and 20 percent bonds (defensive assets).

The Irish fund prohibits investment in Irish government bonds. Its investments in Irish equities are less than 1 percent of total assets, in line with the share of the Irish stock market in Eurozone equities, which are perceived as the relevant domestic market. In New Zealand, local equities account for 7.5 percent of total assets and local bonds for an additional 10 percent. The NZSF has resisted pressures to raise its allocation to local equities to 30 percent or more, but its current allocation exceeds the relative importance of the local market in global equities. The CPPIB has the largest share of assets allocated to local equities and bonds. Even though this share has been declining, it still amounted to 55 percent of total assets in 2006. However, as in other funds, the use of derivatives products, including especially traded options, may cause a substantial change in the relative exposure of the CPPIB to Canadian and foreign assets.

All three funds started by emphasizing passive management through external asset managers. However, this concept was relatively quickly expanded to allow active management, use of customized indexing to limit excessive exposure to index-dominating companies and allow investments in smaller companies, and development of internal management capabilities, first in passive management and progressively also in active management. The approach was later expanded further to encompass investments in several alternative asset classes, including private equity, real estate and infrastructure projects as well as emerging markets.

In the case of Canada, this has even included the taking of principal positions in individual corporations and participating actively in cooperation with private equity funds in hostile takeovers of leading entities in the domestic and international markets (principal investing). It also included the development of short-term trading capabilities. The CPPIB has also established several subsidiaries specializing in private equity investments in emerging countries and plays a management role in large infrastructure projects in several developing countries. In New Zealand the current strategy covers internal management of investments in forestry and timber operations.

In all cases, investments in hedge funds and derivative instruments have also been authorized. Derivatives, including equity index swaps and futures, are used to manage risk, enhance returns, and provide liquidity, but they change drastically the exposure of

[12] GFPG investments are subject to strict ethical guidelines that aim to ensure that the companies in which the fund invests its resources have good corporate governance structures, are well managed, respect human rights, and protect the environment.

funds to different types of assets and risks. The fundamental change in risk exposures that is caused by the use of some derivative products, especially options, makes the discussion of asset and liability structures less meaningful. However, a full presentation of risk exposures is lacking from all publicly available reports and this weakens the claims about complete transparency.

These developments are a far cry from the original idea of passive investment in indexed instruments and the concept of public pension funds as 'managers of managers'. The departure from that ideal has been justified by the need to enhance the investment performance of the fund. In the case of Canada, it has been argued that the new approach is necessary to obviate the need for a future increase in contributions or a reduction in benefits.

This evolution of the strategic asset allocations of the four public pension funds has reflected the growing trend over the past decade or so among large university endowment funds, charitable foundations, and corporate pension funds to diversify out of investments in listed equities and bonds and seek higher returns in alternative asset classes, including private equity, real estate, hedge funds, and emerging markets (Bernstein 2007:205). Alternative asset classes may promise higher expected returns. Although their expected volatility is also likely to be higher, the low correlation of their returns with those of listed equities and bonds implies at most a small increase in the volatility of total portfolio returns. In addition, some of these assets are marked-to-market at infrequent intervals, which would imply a smaller recorded volatility, even if the underlying volatility were much greater.

Thus, the departure of the investment policies of public sector funds from the romantic idea of passive external management follows a widespread trend among large institutional investors. Nevertheless, some aspects of the new approach should raise policy concerns. First is the risk (identified by Warren Buffett, the well-known investor) that 'mark-to-model' valuations may over time mutate to 'mark-to-myth' valuations. The recent experience with CDOs based on sub-prime mortgages lends support to this concern. Second, the more extreme forms of alternative investments, such as management of infrastructure projects, engaging in principal investing, and participation in hostile takeovers, expose public pension funds to risks for which they are unlikely to be well prepared and for which they are unlikely to have the requisite skills. It would be more consistent with the long-term objective of public pension funds to seek to maximize returns with a prudent level of risk if they limited their involvement in alternative asset classes to those that avoid 'principal investor' risks and rely on robust valuation models.

1.9 Implementation of Investment Strategy

Implementation of the investment strategy is the responsibility of executive management. However, the decision regarding the relative reliance on passive and active management and the use of internal and external managers as well as the selection of external managers require board approval. Executive management is fully responsible for monitoring the performance of both internal and external managers and for reporting to the board. Executive management also plays an important advisory role and is often the driving force for important changes in investment strategy. This seems to be more pronounced in Canada where a generous system of executive compensation is used.

Implementation of investment strategy in the four public pension funds involved the selection and appointment of global custodians, transition managers and external asset managers. In all cases, clear technical criteria were established for the selection of external service providers and a transparent process was utilized to ensure objectivity and avoidance of conflicts of interest. Global custodians were selected to secure the legal segregation and safe custody of assets and to facilitate a more efficient monitoring of the performance of external asset managers. Use of global custodians simplifies the assignment and termination of mandates to different managers. Custodians also provide supplementary services in transaction settlement, collection of income, claiming of tax refunds, cash sweeps, fund accounting and reporting, and securities lending. Transition managers were retained to assist in investing large amounts of cash in domestic and foreign markets with minimal market impact.

The number of retained external managers and the number of mandates has increased dramatically over time in all cases following the expansion of investments in private equity, real estate and infrastructure projects. Initially external managers were specializing in passive indexing but over time the emphasis has shifted to asset managers specializing in particular sectors, regions, or strategies. The CPPIB maintains relationships with well over 70 private investment, real estate and infrastructure groups. The Norwegian fund also has a large number of external managers and mandates, while for the remaining two funds, the number of managers ranges between 15 and 25.

The appointment of external managers requires close monitoring of their performance and adoption of well-constructed benchmarks to facilitate the measurement and attribution of performance and risk to different managers. All funds have adopted sophisticated systems of reporting and measurement of risks and returns that complement the work of custodians. Formal review meetings of external asset managers are held at regular intervals and these reviews inform the board decision to renew or terminate particular mandates.

1.10 Investment Performance

All four pension funds have achieved positive investment results with excess returns over their respective benchmarks. However, equity returns have been adversely affected by the bursting of the high tech bubble in 2000 and the fall in equity prices in 2001 and 2002.

In Norway the average annual return over the whole period since 1997 equaled 6.5 percent. The return on equities for the period since 1998 reached 7 percent, while bonds produced over the same period a lower return of 5.4 percent. NBIM reported an excess return that averaged 48 basis points over the period 1998-2006. Operating costs are low and compare favorably with those of other large international pension funds. Overall operating costs reached 10 basis points in 2006. But deducting performance-based fees, the other costs amounted to 7 basis points.

In Canada the average rate of return on all CPP assets for the period 2000-2007 was 8.2 percent. Annual data on excess returns over the benchmark portfolio show that very large excess returns of the order of 8 percentage points were realized in 2001. This is explained by the decision to reduce exposure to Nortel Networks that accounted at the time for 35 percent of the Toronto market. This underscored the benefits of using customized indexing. The operating costs of the CPPIB at 11 basis points appear low at first sight and comparable to those of the most efficient pension fund management institutions around the world, like the TSP in the US, ATP in Denmark, or the NBIM in Norway. In reality, however, total operating costs are higher than the costs of these other institutions. This is because the reported costs exclude external management fees and trading commissions, which amounted to around 20 basis points in the last couple of years. Adding external management fees and trading commissions to total operating costs would raise their level to between 28 and 42 basis points over the last 5 years.[13]

In Ireland investment returns fluctuated considerably from year to year, reflecting the high volatility of equity market returns in the early years of the new millennium. The fund achieved a substantial excess return over its benchmark in 2001 and 2002 mainly because of a deliberate delay in implementing its asset allocation strategy. The annualized average rate of return over the whole period 2001-2006 amounted to 6.5 percent. Operating expenses, including the expenses of NTMA, increased over time and amounted to 21 basis points in 2006. The combined Commission and NTMA expenses ranged between 6 and 7 basis points and are comparable to management expenses of other large pension funds. However, external management fees exceeded 15 basis points.

In New Zealand fund performance, net of investment management expenses, averaged 14.5 percent since its inception. The strong results are attributed to the fact that the fund avoided the unsettled markets at the start of the new millennium. Mainly because of the young age of the fund and its small size, operating expenses relative to average total assets are high by comparison to other large public pension funds. Operating expenses rose to 71 basis points in 2006, up from 28 points in 2004. Investment management fees account for the lion's share of expenses.

1.11 Concluding Remarks

The newly created public pension funds of Canada, Ireland and New Zealand share many common characteristics. They all have small professional boards, are independent of government, and operate with a very high level of transparency and public accountability. They all have regular sources of funding as well as long investment horizons and they have been charged with a commercial mandate to seek high investment returns with a prudent level of risk. The boards of directors are responsible for setting the strategic asset allocation and executive management for implementing the chosen strategy.

[13] It should be noted that reported operating costs of most pension funds do not include investment management fees charged indirectly for participations in investment funds.

The GPFG of Norway shares all these features, except that it is not independent of government. Its asset allocation is determined by the Ministry of Finance and approved by Parliament. However, the adoption of the 4-pecent fiscal rule, whereby only 4 percent of the total value of the fund can be used in any one year to finance the structural deficit of the government, has placed a strict limit on the use of the fund for current political objectives. A practical aspect of the different composition of the board is that, despite being the largest and having the longest investment horizon, the Norwegian fund has persistently adopted the most conservative asset allocation of all four funds.

Two of the public pension funds (CPPIB and NZSF) have appointed internal chief executives. Management of the Irish fund has been assigned to the National Treasury Management Agency (NTMA), which also manages the public debt of Ireland. In Norway, executive management of the fund has been entrusted to Norges Bank. The latter created a special investment management unit, NBIM, which has discharged its duties as manager in the same professional way as the executive managers of the other three funds.

All four funds were initially set up to operate with a small complement of skilled staff, build diversified portfolios of global equities and bonds, and effectively act as managers of managers, focusing on passive indexed management through external managers. This romantic idea did not last long. Passive indexed management was soon complemented with enhanced indexing, which allows transactions that respond to special pricing opportunities, and customized indexing, which limits exposure to index-dominating companies and also allows investments in smaller local companies that are not included in the main market index. Then passive management was brought in-house, followed after a while with developing internal active management. The role of external managers was gradually limited to implementing active overlay programs, seeking excess returns through performance-based contracts.

A major shift in investment strategy occurred with decisions to expand allocations to private equity, real estate and other alternative assets. These investments involve non-passive management, although they rely for the most part on external managers. Three of the funds have already authorized substantial increases in such allocations, while in Norway the case for investments in alternative assets is under evaluation. The Canadian fund has also pursued principal investing, management of infrastructure projects, and short-term trading. For its part, the New Zealand fund has become involved in operating large timber investments.

Alternative asset classes promise high returns and their valuation is not exposed to the high volatility of securities traded on public markets. But they are a far cry from the original perception of passive indexed management through external managers. An important implication of these changes has been a large expansion of staff, especially by the Canadian and Norwegian funds.

The investment performance of the four funds has been positive in real terms but far from spectacular. This is explained by the poor returns of global equity markets in the first few years of the new millennium following the bursting of the high tech bubble in early 2000. The New Zealand fund, which started operations after the rebounding of equity markets, has reported much higher investment returns than the other three funds. Excess returns relative to their benchmarks have been realized by all funds. However, the growing emphasis on alternative asset classes, which are not 'marked-to-market' but are rather 'marked-to-model', weakens the relevance of the benchmarks.

In conclusion, despite the clear and significant departure from the original concept of external passive management, the experience of the four public funds has been positive. Governance and public accountability are strong in all countries. Their example has already been followed in several other OECD countries and is likely to be copied in a growing number of developing countries where public pension funds continue to play an important role. However, care needs to be taken to ensure that the more active approach to management and the emphasis on alternative asset classes do not cause a derailment of the fundamental objective of these funds, which is to help finance the anticipated large increase in public pension outlays over the next 20 to 50 years. As the investment horizon of these funds becomes shorter, asset allocation strategies would need to be adjusted to favor more liquid instruments that are easier to value.

1.12 Lessons for Other Countries

At the risk of some repetition and oversimplification we summarize below the main lessons for other countries. These are presented as a checklist of policy issues.

Preconditions: Public pension funds should be established only if they can rely on regular transfers of funds and can operate with long investment horizons. Care should be taken to avoid a large level of public debt; in other words, countries that have high levels of public debt should give priority to a reduction in their debt level before they start transferring resources to a public pension fund. The size of the public pension fund should not be too large relative to the national economy and the local financial markets. Global diversification should be encouraged. Countries, which already have public pension funds and seek to modernize their investment operations, should also address questions regarding their relative size and should consider changing other parameters to ensure that their public pension fund does not acquire a dominant position in the local economy and financial market. Needless to add, the ability to enforce high standards of fund governance is crucial to the success of the new approach to public pension fund management.

Objective: The public pension fund should have a clear and unequivocal commercial mandate. The mandate should be to seek to maximize long-term investment returns, subject to a prudent level of risk, and after taking fully into account the structure of its liabilities and the length of its investment horizon.

Legal Status: The public pension fund should ideally be established as a separate legal entity and not as a general government agency. This would imply that it should not be treated as a budgetary unit and its assets should be legally segregated from the general government.

Institutional Independence: The public pension fund should be independent from government and should be insulated from political interference. However, the fund should be required to operate with a very high level of public transparency and should be subject to full public accountability to Parliament and its main stakeholders.

Funding Sources: The public pension fund should have access to stable and long-term sources of funding. Ideally, funding should be in the form of regular transfers either from the surplus of worker contributions over pension benefits or directly from the budget. Funding could be supplemented with ad hoc transfers from privatization revenues or other financial transactions.

Board of Directors: The public pension fund should have a small board of experts (less than 10) rather than representatives of stakeholders or ex-officio appointees. There should be a sufficient number of directors with adequate expertise and experience on financial matters, investment policies and portfolio management. To ensure the appointment of high-caliber professionals, a nominating committee should be created to identify a short list of candidates from which the Minister of Finance would make director appointments. To promote continuity, director appointments should be staggered. Appointments should be for fixed terms and could be renewed for a stated number of terms (2 or 3), while removals should only be permitted for just cause. The process of director removal should be clearly stipulated in the relevant act.

Board Committees: The Board of Directors should create several key committees with clear terms of reference and areas of responsibility. These should include an audit committee, a governance committee, and an investment committee. Outside experts could be recruited to serve on these committees along side board directors.

Governance Policies: The Board of Directors should establish clear guidelines on corporate governance, including rules on conflicts of interest and ethical conduct by directors and senior managers of the fund. It should also establish clear policies on its role in promoting good practices of corporate governance in investee companies. These should emphasize transparency and public disclosure and full respect of shareholder rights.

Internal Controls: The Audit Committee of the Board should establish clear policies on internal control systems and should especially institute a separation of investment decision making from back-office operations, such as confirmation and settlement of transactions, record keeping, and measurement and attribution of investment performance and risk.

Investment Policy and Strategic Asset Allocation: The Investment Committee could undertake the fundamental analysis of options but the Board of Directors should be responsible for approving the investment policy and asset allocation strategy. This should be based on the investment horizon of the fund and should take into account the expected returns and risk levels of different types of instruments. The structure of liabilities should also be taken into account. Initially, passive management of investments in listed equities and bonds could be favored but over time consideration could also be given to active management and investment in unlisted securities, including alternative asset classes, such as private equity, real estate and infrastructure projects. Even with passive management, customized and enhanced indexing should be adopted at an early stage to mitigate risks and increase returns.[14] In contrast, principal investing and assumption of managerial responsibilities in individual companies or projects should be avoided unless there are strong reasons and well-documented safeguards in favor of such initiatives. The strategic asset allocation should be subject to regular reviews and should be modified in the light of experience and changing market conditions.

Executive Management: The Board of Directors should have responsibility for appointing a Chief Executive Officer and approving the selection of top management, including a chief accountant, an internal auditor, and an actuary (if necessary). Alternatively, it could opt for appointing an external agency for the executive management of the fund. An external management agency should specialize in managing long-term investment assets and should employ staff with long experience and relevant skills in the markets in which the assets of the fund are to be invested. It should also recruit staff that is experienced in selecting, managing and monitoring the performance of external asset managers. The management agency should also develop sophisticated information systems to track the performance of asset managers.

Selection of External Service Providers: The Board of Directors should be responsible for the selection and termination of various providers of external services, including a global custodian, a transition manager (if necessary), external asset managers, external auditors, and external consultants. Clear and detailed selection criteria should be adopted, while the performance of external asset managers should be monitored and evaluated by reference to well-constructed benchmarks that properly reflect the level of risk of particular assets. The Board of Directors should opt for using specialist external consultants in setting the asset allocation strategy and determining the selection criteria for other service providers. The appointment of a reputable global custodian is a particularly important decision because global custodians play a very critical role in the segregation and safekeeping of assets and in monitoring the performance of external asset managers.

Transparency and Public Disclosure: The Board should abide by a very high level of transparency and public disclosure. It should publish audited annual financial statements, quarterly performance reviews as well as internal and external governance and other audit

[14] Customized indexing would limit investments in index-dominating companies and would also permit investments in smaller companies that are not included in the market index. Enhanced indexing would allow the exploitation of special pricing opportunities.

reviews. It should publish its investment policy objectives and all its corporate and internal control guidelines. Its chairperson should be required to report periodically to relevant Parliamentary committees.

2. Norway: The Government Pension Fund - Global

2.1 Objective

Norway created the Government Petroleum Fund in 1990. The Norwegian authorities decided to save most of net oil revenues and invest it overseas. This would both preserve assets for future generations and avoid the Dutch disease effects that would likely ensue from immediate spending of the oil wealth (Kjaer 2004).

The Petroleum Fund was not initially formally set up as a pension fund although it was from the start expected to play an important part in meeting future demands on state pension expenditures. In January 2006, the link was formally recognized and the Government Petroleum Fund was officially renamed the Government Pension Fund - Global. This reflects the global orientation of its investments. There is also a Government Pension Fund - Norway, which manages the domestic, and much smaller, assets of the National Insurance Fund. The total assets of the Government Pension Fund amounted in 2006 to 1,891 billion NOK or 88 percent of GDP. The global fund has the lion's share with 83 percent of GDP, while the domestic fund has assets equal to 5 percent of GDP.

Norway did not face a policy dilemma between creating a new fund and paying off public debt. Total domestic government debt amounted in 2006 to 239 billion NOK or about 12 percent of GDP (Norges Bank 2006). The low level of public debt supports the allocation of net oil revenues to the Government Pension Fund. If the public debt had been much higher, oil revenues would presumably have been used to lower the debt to a more moderate level. The long-term strategy of government borrowing is to maintain a yield curve with particular emphasis on liquid benchmark issues of 5 and 10 year maturities. Nearly half (46 percent) of public debt is held by foreign investors, while life insurance companies and private pension funds own about 31 percent.

2.2 Funding Sources

No transfers to the global fund took place in the first half of the 1990s because of low net oil income and large oil-related investments (IMF 2007). The first transfer, which equaled the surplus on central government accounts in 1995, was made in May 1996. Since then, annual transfers have been quite sizable, exceeding on several occasions 10 percent of GDP, as both oil production and the price of oil increased rapidly, while oil-related investments declined (Table 2.1).

The so-called 4-percent fiscal rule was adopted in 2001. This limits the non-oil government budget deficit to 4 percent of the value of the accumulated fund, i.e. the expected real rate of return on fund assets. [15] It is interesting to note that the 4-percent

[15] This rule maintains the real value of Fund assets. However, because of the long-term growth of GDP, the Fund will become insignificant in relation to national income in the very long run. Alternative rules include a non-oil public deficit that is equal either to a given percentage of GDP or to the long-term rate of return on Fund assets minus the projected rate of economic growth. See IMF (2007) for a discussion of the long-term implications of these issues.

rule was breached every year after its adoption but the deviations became smaller over time (IMF 2007).

Taking into account the investment income generated by its assets, the size of the fund has grown at a rapid pace both in absolute terms and as proportion of GDP. The fund accumulated assets equal to 1,784 billion NOK in 2006, equivalent to about 285 billion USD (216 billion EUR) or 83 percent of GDP. The assets of the Government Pension Fund - Norway amounted in 2006 to 107 billion NOK or 5 percent of GDP.

Table 2.1: Annual Transfers and Total Assets of GPF, 2000-2006

	2000	2001	2002	2003	2004	2005	2006
Transfers (NOK bn)	149.8	251.2	125.4	103.9	138.2	220.3	288.3
Percent of GDP	10.2	16.5	8.3	6.6	8.0	11.6	13.4
Assets (NOK bn)	386.5	613.7	609.0	845.3	1016.4	1399.0	1783.7
Percent of GDP	26.3	40.2	40.1	53.6	59.2	73.5	83.0

Source: NBIM and IFS

2.3 Institutional Structure and Fund Governance

Norway did not establish the GPFG as an independent legal entity.[16] The fund itself has no rights or obligations against private sector entities or public authorities and may not institute, or be subject to, legal proceedings (Government Pension Fund Act, 2005, chapter 1, section 6). Responsibility for managing the fund is vested in the Ministry of Finance, which makes all strategic decisions, formulates investment policy objectives, and sets the strategic asset allocation and benchmarks.

Apart from the 4-percent fiscal rule, no other special measures have been adopted to insulate the fund from political interference. The fiscal rule limiting the use of accumulated balances is set by the government and must be approved by Parliament. The strategic asset allocation is also subject to parliamentary approval.

The Ministry selected Norges Bank as the operational manager of the fund. The assignment is open-ended and is subject to a one-year period of notice of termination by either party. The Ministry supervises the operations of the bank and uses independent consultants to evaluate its performance. Norges Bank exercises the voting rights of the fund.

The fund is required to operate with a very high level of transparency and public accountability. The Ministry reports to Parliament, through national budget documents, on the performance of the fund and on the Bank's management. Norges Bank holds press conferences every quarter to explain its results and compare them against the benchmarks set by the Ministry. It posts on its website comprehensive reports on the performance of

[16] A decision was taken in 2007 to organize the National Insurance Fund, which manages the Government Pension Fund - Norway, as a separate legal entity. Thus, the operational managers of the two funds will be legal entities, but the funds themselves will not.

the fund, including a complete list of holdings of securities and an assessment of the bank's contribution as operational manager.

Norges Bank decided in 1998 to create a new unit, Norges Bank Investment Management (NBIM), for managing the assets of the GPFG as well as those of the Government Petroleum Insurance Fund and the part of official foreign exchange reserves that were not needed for liquidity purposes. Prior to the creation of this specialized unit, the Market Operations Department was dealing with the management of foreign exchange reserves. But the bank felt that the investment experience gained from managing the foreign exchange reserves did not provide an adequate foundation for efficient management of the much larger and longer-term resources of the GPFG.

NBIM was created by transferring some staff from the existing department but also through extensive external recruitment. NBIM had 41 staff at the end of 1998. This grew to 79 by 1999 and continued to expand and reached 128 staff at the end of 2006. Some of the staff is based in the London and New York offices of NBIM. Remuneration is on a separate scale and reflects international competitive levels.

NBIM established from the start proper procedures to separate investment decisions from back-office operations, including recordkeeping, settlement, and risk and return measurement. Its executive director reports directly to the Governor of the central bank, while an internal audit system was also created. This was upgraded in 2006 following a decision of the Executive Board of Norges Bank to create an Audit Committee and to require the internal audit department to report directly to the Audit Committee and through it to the Board.

The assets of the GFPG are segregated from the other assets of the central bank and are reported separately in the bank's balance sheet as a government account. Proper custodial arrangements have been put in place for the safe custody of assets, securities are marked to market on a continuous basis, and both risk and return measurements are closely monitored and assessed.

2.4 Investment Policy Objectives and Strategic Asset Allocation

The formulation of investment policy objectives and the determination of strategic asset allocation rest with the Ministry of Finance. An Advisory Council on Investment Strategy has been appointed, while Norges Bank also offers technical advice to the Ministry on investment policy matters. However, the Ministry retains responsibility for making proposals to Parliament, which debates changes in investment policy and strategic asset allocation.

Initially the fund was entirely invested in fixed-income securities. In 1997, after two Parliamentary debates, the Ministry decided to change the strategic asset allocation to 60 percent bonds and 40 percent equities. Norges Bank advised the Ministry of Finance on the risks and expected returns of equity markets (Kjaer 2004). At that time, it was also decided to exclude investments in Norwegian equities because the local market represented only 0.2 percent of the global equity market and the fund would be too large for the local market. It was also pointed out that the Norwegian authorities had other funds that could be used to provide state capital to support the local economy.

The decision to allocate only 40 percent of the fund in global equities could be questioned given the very long investment horizon of the GPFG and the persistence of the equity premium in global markets over a period of more than 100 years (Dimson et al 2002). But risk tolerance was rather low in Norway at that time. Because of the poor performance of global equity markets at the turn of the millennium, the fund suffered large losses in 2001 and 2002 that were aggravated further by the relative appreciation of the Norwegian currency.

The investment guidelines issued by the Ministry, and retained in the Government Pension Fund Act of 2005 (chapter 2, section 4), set the equity share between 30 and 50 percent of the portfolio and fixed income instruments between 50 and 70 percent. The regional allocation is divided into 3 parts, Europe, Americas and Africa, and Asia and Oceania. The range for equities is: Europe 40-60 percent, Americas and Africa 25-45 percent, and Asia and Oceania 5-25 percent. The range for bonds is slightly different: Europe 50-70 percent, Americas and Africa 25-45 percent, and Asia and Oceania 0-15 percent. Several emerging market countries were included in the detailed list of approved currencies and markets in the 2005 Act. These ranged from Brazil, Chile and Mexico in Latin America to South Africa in Africa and China, India, Indonesia, Philippines, and Thailand in Asia.

In 2006 the Ministry made some important changes in its investment guidelines. The maximum ownership stake in individual companies was raised from 3 to 5 percent, the minimum credit rating requirement of a BBB investment grade for corporate bonds was removed, and investments in commodity-based contracts and in funds were permitted.

Following a review of the fund's investment strategy and taking into account the strong performance of equity markets in the last four years, the authorities announced in the 2007 White Paper on the Government Pension Fund their intention to increase the equity allocation to 60 percent as well as to expand the universe of eligible investments by including small listed companies in the benchmark portfolio (MOF 2007). Both of these changes will be implemented over several years to minimize transaction costs. In addition, the authorities indicated that they are evaluating the possible inclusion of real estate and infrastructure investments as a new asset class. Another proposed change concerns the delegation to Norges Bank of the decision to select the currencies and equity markets in which the fund can be invested.

Norges Bank in an earlier submission to the Ministry argued in favor of increasing the equity allocation and noted that the higher variability in annual returns would be justified by the expected increase in their level. Anticipating growing challenges in investment management Norges Bank established in 2006 an advisory board composed of four internationally respected experts with extensive experience from large investment management institutions.

The investment policy objectives specify that in its investments the fund should observe ethical guidelines established by the Ministry of Finance. A five-member Advisory Council on Ethics has been created to advise the Ministry on these issues. The Ministry maintains a negative list of companies that, following a recommendation from the Advisory Council on Ethics, are excluded on ethical grounds from the investment universe of the fund. The ethical guidelines aim to ensure that the companies in which the fund invests its resources have good corporate governance structures, are well managed, respect human rights, and protect the environment.

2.5 Implementation of Investment Strategy

Norges Bank is responsible for implementing the investment strategy which, as noted above, is undertaken by NBIM. The Ministry of Finance establishes and makes public the portfolio benchmarks.[17] Academic observers and journalists are able to calculate the return of the benchmarks each quarter and thus to compare the performance of NBIM as investment manager.

NBIM is expected to pursue passive investment management, tracking the benchmarks stipulated by the Ministry, but some active management is allowed subject to a limit of 1.5 percent in expected tracking error. Initially, NBIM hired external managers for passive equity index management and conducted in-house passive indexed fixed income management. Over time, however, NBIM has moved away from this approach, undertaking enhanced indexing internally for both equities and bonds and hiring specialist managers for more active management in both types of instruments. NBIM has not yet been authorized to invest in real estate, infrastructure and private equity, although as mentioned above and following spreading international practice, Norges Bank has suggested to the Ministry the need to evaluate the case for investing in alternative assets.

NBIM pursues the achievement of excess return by means of a large number of independent individual decisions. Investment decisions as well as selection of external managers are assigned to individual staff members. The choice between external and internal management is governed by expected profitability and specialized expertise. The main criteria for the selection of external managers are track record, access to relevant information, proven skill in building appropriate portfolios, and operational efficiency.

About 80 percent of assets are managed internally, taking advantage of the economies of scale that are inherent in the fund's size, while 20 percent are awarded to external managers, mostly for specialized equity mandates (by geographic region or by industrial sector). However, external mandates account for about 50 percent of value at risk. Their contracts are based on performance fees and, mainly for this reason, external mandates account for over 60 percent of all costs.

[17] For equity investments, this was stated in the 2005 Act (chapter 3, section 1.2) to consist of 50 percent FTSE All-World Europe; 35 percent FTSE All-World Americas/FTSE All-World Africa; and 15 percent FTSE All-World Asia Pacific.

NBIM employed 8 external managers with 8 mandates in 1998, but their number increased steadily over time and reached 50 external managers with a total of 80 mandates in 2006: 22 managers with 35 mandates in the fixed income segment and 28 managers with 45 mandates in equities.

Internal management is divided between enhanced indexing, which follows a passive approach but with some allowance for transactions that respond to special pricing opportunities, and active management, which involves both stock selection and market timing. NBIM also engages in securities lending to augment the income of the fund. It has lending agreements with several global banks.

2.6 Investment Performance

Since the equity allocation has been allowed, the equity portion of the portfolio, including the small environmental fund, has fluctuated within a small range around 40 percent (Table 2.2).

Table 2.2: Asset Allocation, 2000-2006

percent of total assets	2000	2001	2002	2003	2004	2005	2006
Equities	39.5	40.9	37.9	42.7	41.0	41.6	40.7
Fixed Income	60.5	59.1	62.1	57.3	59.0	58.4	59.3

Source: NBIM

The investment return, measured in terms of the currency basket in which the various securities are held, amounted in 2006 to 7.9 percent. Over the whole period since 1997, the average return equaled 6.5 percent. The return on equities for the period 1998-2006 reached 7 percent, while bonds produced a lower return of 5.4 percent over the same period. Investment returns calculated in terms of the local currency fluctuated more widely from year to year because of the relative appreciation or depreciation of the local currency but over the whole period the average return expressed in Norwegian crowns was 6.4 percent, almost identical to the return calculated in the currency basket.[18]

Equity returns suffered from the bursting of the high tech bubble in 2000 and the sharp market correction of the first few years of the new millennium, but benefited from the substantial rebounding of global equity markets in the past four years. Bond returns have been less volatile but have been lower on average (Table 2.3).

Table 2.3: Asset Returns on Equities and Bonds, 2000-2006

percent	2000	2001	2002	2003	2004	2005	2006
Equities	-5.82	-14.58	-24.38	22.84	13.00	22.49	17.04
Fixed Income	8.41	5.04	9.90	5.26	6.10	3.82	1.93
Total Portfolio	2.50	-2.43	-4.69	12.59	8.94	11.09	7.92

Source: NBIM

[18] It is worth noting that the Government Pension Fund - Norway enjoyed a higher return (measured in NOK) of 11.7 percent in 2006 and an average return since 1997 of 7.1 percent (MOF 2007).

NBIM achieved an excess return that averaged 48 basis points over the period 1998-2006. Over the 3-year period 2004-2006, internal management made a higher contribution to excess returns, after deducting operating costs, than external management (Table 2.4).

Table 2.4: Annualized Contribution to Net Excess Returns, 2004-2006

in basis points	External	Internal	Total
Equities	13	18	31
Fixed Income	3	14	17
Total	16	32	48

Source: NBIM

The inferior contribution of external equity management was caused by a poor performance of external managers in the Japanese equity market in 2006. This is reflected in the negative contribution of external equity management in 2006. In earlier years, external equity management achieved a superior performance (Table 2.5).

Table 2.5: Annualized Contribution to Excess Returns, 2002-2006

in basis points	2002	2003	2004	2005	2006
Internal Equities	1	6	11	20	31
Internal Bonds	9	18	17	20	13
Internal Total	10	24	28	40	44
External Equities	10	20	21	65	-32
External Bonds	5	15	4	5	3
External Total	15	35	25	70	-29
Total Gross Excess Return	25	59	53	110	15
Management Costs	4	5	4	5	3
Total Net Excess Return	21	54	49	105	12

Source: NBIM

The operating costs of NBIM are low and compare favorably with those of other large international pension funds. Internal management costs declined over time and reached slightly less than 5 basis points of average internally-managed assets in 2006 (Table 2.6). In contrast, external management experienced a rising trend and its costs amounted to close to 30 basis points of average externally-managed assets in 2006.

Overall operating costs increased slightly to 10 basis points. However, after deducting performance-based fees, the other costs fell from 7.9 basis points in 2002 to 7.3 in 2006. This is well within the target agreed by negotiation between the Ministry and the Bank. Norges Bank charges directly the Ministry for these costs. Performance-based fees are paid separately by the Ministry of Finance, which examines and approves each individual contract.

Table 2.6: Contribution to Operating Costs, 2002-2006

in basis points	2002	2003	2004	2005	2006
Internal Assets (% of total assets)	80	77	78	78	79
External Assets (% of total assets)	20	23	22	22	21
Internal Management Costs	7.0	6.2	5.1	4.9	4.8
External Management Costs	17.1	24.4	29.4	31.1	28.3
Internal Contribution to Costs	5.7	4.8	4.0	3.8	3.8
External Contribution to Costs	3.3	5.6	6.5	6.8	6.0
Total Costs	9.0	10.4	10.5	10.6	9.8
Performance Based Fees	1.1	1.2	2.6	2.7	2.5
Costs without Performance Fees	7.9	9.2	7.9	7.9	7.3

Source: NBIM

Norges Bank participates in the database of operating costs of large pension funds that is compiled by the Canadian consulting firm, CEM Benchmarking Inc. This database includes cost performance data on over 250 pension funds. A peer group of large pension funds that has been selected by CEM from this database shows that NBIM has lower operating costs than the median fund from this peer group (Table 2.7).

Table 2.7: Comparative Database of Operating Costs, 2003-2005

in basis points	2003	2004	2005
GPF – Global	10.4	10.5	10.6
Peer Group – Median	13.1	12.0	13.4

Source: NBIM

2.7 Concluding Remarks

The Norwegian GPFG has been created to preserve oil wealth for future generations and help meet rising pension expenditures. The fund does not have a separate legal entity but is effectively a government account with the central bank.

Decisions about investment policy objectives and strategic asset allocation are the responsibility of the Ministry of Finance, but must be approved by Parliament. Norges Bank, which has been selected as the operational manager of the fund, provides advice on investment policy. Asset allocation has been conservative, despite the long investment horizon. This has been influenced by the need for parliamentary debate and approval of the strategic asset allocation and has probably reflected a low level of risk tolerance.

The fund is subject to a very high level of transparency and public accountability, but it is not completely insulated from political interference. However, the so-called 4-percent fiscal rule, which states that the annual structural budget deficit should not exceed 4 percent of Fund assets, imposes some discipline on political pressures to increase public spending.

Initially the fund was entirely invested in fixed-income securities. But since 1998 the strategic asset allocation has been 60 percent bonds and 40 percent equities. Investments in Norwegian equities have been excluded. The government announced in late 2006 its intention to raise the equity allocation to 60 percent. Investments in alternative assets are under evaluation but have yet to be approved.

The central bank created a new unit, Norges Bank Investment Management (NBIM), to manage the assets of the fund. NBIM maintains in its operations a clear separation of investment decisions from back-office operations. It aims to earn an excess return over the benchmark portfolios established by the Ministry and uses both internal and external managers. Initially, most investments were made through passive indexed management. External managers were used for global equities and internal managers for fixed income instruments. But over time greater emphasis has been placed on enhanced indexing and active management. This has involved a large expansion of staff.

The lack of independence from government and the need for parliamentary debate and approval probably explain the clear conservatism in investment policy and the apparent timidity in investing in alternative asset classes. These asset classes (real estate and private equity) are currently favored by the 'expert' boards of similar funds in other OECD countries, although in some of them the tilt in favor of such assets may have gone too far. It is very difficult to define a golden rule in these matters. An increased allocation to equities seems fully justified given the long investment horizon of the fund. A large allocation to real estate and private equity could also be justified given the promise of much higher returns in the long run. However, a leading role in organizing mergers and acquisitions and corporate restructurings, in which some public pension funds in Canada have engaged in recent years, would veer too far away from the basic objectives of the fund.

3. Canada: The Canada Pension Plan Investment Board

3.1 Objectives[19]

The Canada Pension Plan Investment Board (CPPIB) was created in December 1997 following a broad agreement between the federal government and the provinces that participate in the Canada Pension Plan. Its mandate is to maximize investment returns on the cash flows received from the Canada Pension Plan without incurring undue risk and having regard to the factors that may affect the funding of the CPP and its ability to meet its financial obligations on any given business day.

The Province of Quebec did not join the CPP when it was first set up in 1966 and opted to create its own provincial pension system, the Quebec Pension Plan (QPP).[20] The Caisse de Dépôt et Placement du Québec (CDPQ) has been entrusted with managing the reserves of the QPP along with the reserves of numerous employment-based public sector pension plans. The CDPQ has invested accumulated assets in equities and debt securities in Quebec as well as outside Quebec and in overseas markets to the extent permitted by the foreign property rule.[21]

For its part, the CPP had accumulated prior to1998 a small amount of assets, which had been invested in 20-year non-marketable debt securities of the federal and participating provincial governments. A public pension fund that is entirely invested in non-marketable government securities is effectively a 'notional' fund. For all practical purposes it is the same as if the pension scheme operates on a 'pay-as-you-go' basis. The 'notional' fund that existed prior to the creation of the CPPIB amounted to 36.5 billion CAD or 4 percent of GDP. This was equal to 8 percent of actuarial pension liabilities.

Faced with the growing financial pressures of demographic aging and a looming financial crisis for the CPP by 2015, the Canadian authorities took various steps in the mid-1990s. They decided to accelerate the projected increase in the contribution rate from 6 percent in 1997 to 9.9 percent in 2002. They also instituted various improvements in plan administration and they created the CPPIB to manage the reserve assets that were expected to grow rapidly (MacNaughton 2004). The intention of these changes was to increase the funding ratio of CPP from 8 to 20 percent or more and assure the long-term fiscal sustainability of the plan.

The CPPIB followed the precedent set by the CDPQ in 1966 and the Ontario Teachers Pension Plan (OTPP) in 1990. Since its establishment, the CDPQ has invested its assets

[19] Comments received from John Ilkiw and John Graham of the CPPIB are gratefully acknowledged. However, the usual disclaimer applies.
[20] A portability agreement between the CPP and QPP has ensured that workers moving between Quebec and the other provinces have been able to transfer their credits between the plans.
[21] The foreign property rule was removed in June 2005.

in a diversified portfolio.[22] For its part, the OTPP used to invest all its assets in non-marketable government bonds but it was authorized in 1990 to diversify its portfolio and has since developed an elaborate investment strategy that, like the CDPQ, includes investments in Canadian and foreign public equities as well as private equities and other alternative assets.

3.2 Funding Sources

The CPPIB received the first transfer of funds in March 1999. It receives all cash flows that are not required by the CPP to pay current pensions and also retains all investment income generated from its operations. The CPPIB also received the proceeds of redeemed federal and provincial government bonds.

Under a 1996 agreement among provincial governments, each province had the option to roll over its existing bonds for one further 20-year term. Funds not rolled over were transferred to the Investment Board, unless they were needed by the CPP. Federal bonds, which amounted to 3.4 billion CAD in 1999, did not have the rollover option. The bond portfolio of CPP was managed by the Federal Department of Finance (FDF) until April 2007 when the small amount of remaining bonds was transferred to the CPPIB.

The total assets of the Plan and the Board grew rapidly in recent years, reflecting the increase in contribution rates and the higher investment returns achieved by the CPPIB (Table 3.1). The total assets of CPP rose from 44.5 billion CAD in 2000 to 117 billion CAD in March 2007. The fixed-income securities of CPP fell steadily during this period and were less than 1 billion CAD in 2007. In contrast, the assets managed by CPPIB expanded from 2.4 billion CAD in 2000 to 116 billion CAD in 2007. The total assets corresponded in March 2007 to 8.1 percent of 2006 GDP, up from 4.5 percent in 2000.

Table 3.1: Total Assets of CPP and CPPIB, 2000-2007

end March in billion CAD	2000	2001	2002	2003	2004	2005	2006	2007
Total Assets of CPPIB	2.4	7.2	14.3	17.5	32.8	58.6	88.6	115.9
Bonds with FDF	42.1	41.5	39.3	38.1	37.7	22.7	9.4	0.7
Total Assets of CPP	44.5	48.7	53.6	55.6	70.5	81.3	98.0	116.6
CPPIB Assets (% GDP)	0.2	0.7	1.3	1.5	2.7	4.5	6.5	8.1
CPP Assets (% GDP)	4.5	4.5	4.8	4.8	5.8	6.3	7.2	8.1

Source: CPPIB

Public debt in Canada is much higher than in Ireland, New Zealand and Norway and does not allow the government to make an additional contribution to building the assets of CPP. Net federal public debt is estimated at 35 percent of GDP, while including the debt of provinces the total probably exceeds 60 percent of GDP.

[22] The CDPQ operates under a dual mandate to both earn investment returns and promote economic development in Quebec, while the CPPIB has no public policy mandate.

3.3 Institutional Structure and Fund Governance

The CPPIB has been established as an independent state institution with its own board of directors. This consists of 12 members appointed by the federal Minister of Finance in consultation with provincial finance ministers. It operates with a strong governance structure. This is based on two important principles: independence from government and other interests, especially in making investment decisions; and full public accountability.

The CPPIB has a unique corporate status: it operates at arm's length from government at both the federal and provincial level, its assets are segregated from government assets, and its staff is not part of the public service. It is thus able to function as a professional investment manager in the private sector with strong public sector accountability.

A two-stage process was followed in selecting and appointing the founding board of directors. First, a special nominating committee was created by the federal and provincial governments. This committee consisted of business executives and government officials representing each province, with a private sector executive in the chair, and was asked to identify and recommend individuals for board directorships. Second, the federal Minister of Finance, in consultation with provincial finance ministers, appointed directors from the nominating committee's list. The Chair was appointed in consultation with the provinces and directors. This process aimed to ensure that the board has extensive business, investment, financial and professional expertise, but also represents all regions of Canada.

The same two-stage process is used for appointing new directors. Directors are appointed for three-year terms and can be re-appointed for two more terms. Directors can only be removed for just cause. Appointments are staggered to ensure continuity.

Regarding the qualifications of directors, the act requires that the board includes a sufficient number of directors with proven financial ability or relevant work experience such that it will be able to effectively achieve its objectives. Thus, the act mandates a board of experts rather than a board of employer and worker representatives but does not specify the required level of financial knowledge and expertise. Given the rapid growth of financial innovation of recent years and the proliferation of highly complex products and strategies it is not clear that broadly-defined business and professional experience would equip directors with the necessary knowledge to assess accurately the prospects of investment initiatives brought to the attention of the board by senior management. However, this is an issue that affects all types of entities, private corporations as well as public sector bodies, not just public pension funds like the CPPIB.[23]

Board directors are required to act honestly and in good faith in the best interest of the Investment Board. As fiduciaries, they must exercise the care, diligence and skill that a reasonably prudent person would exercise in comparable circumstances. The directors are

[23] The CPPIB has recognized these challenges and has attempted to address them through the implementation of a risk-based governance structure in 2006.

responsible for setting investment policies, standards and procedures; designating the offices of the Board, appointing officers, and specifying their duties; appointing an internal and external independent auditor; formulating procedures to identify and resolve conflicts of interest; creating a code of conduct for directors, officers and employees; supervising management; and communicating with stakeholders.

Under the CPPIB Act, board directors cannot be appointed officers of the Board and officers cannot serve as directors. The positions of Board Chair and Chief Executive Office are separate. The Chair is responsible for leading the Board of Directors and the CEO for leading management. The Board of Directors appoints the CEO.

The board of directors has adopted corporate governance guidelines, a code of conduct for directors and employees, and conflict of interest guidelines developed with the assistance of an external advisor. A consulting firm was retained to advice on board compensation. It recommended fees based on the compensation for comparable public sector organizations. The board also adopted procedures for evaluating the performance of both board directors and senior management.

Four board committees have been created. Two of these, the investment and audit committees, are required by the CPPIB Act. The investment committee is responsible for establishing investment policies, standards and procedures as well as reviewing and approving the annual investment plan and monitoring its effectiveness. It is also responsible for reviewing the investment risk management approach and approving the engagement of external fund managers and asset custodians. The audit committee oversees financial reporting, the external and internal audit, information systems, and internal control policies and practices. The human resources and compensation committee is responsible for compensation policy, the performance evaluation process for the CEO, and organizational structure. The governance committee is responsible for recommending governance policies, guidelines and procedures and monitoring compliance with the code of conduct and conflict of interest guidelines. According to CPPIB’s Code of Conduct any attempt by government to influence the investment decisions, hiring practices or procurement must be reported to, among others, the Chair or the CEO, who will take appropriate action.

The board of directors appointed the first chief executive officer in September 1999. Initially, the CPPIB was managed by a small team of senior investment and business executives. A decision was taken to avoid building a large organization with specialized departments for particular investment classes, such as real estate and private equity. But with the passage of time, this decision was reversed. The size of staff increased substantially from 15 in 2001 to 271 in 2007. Most of the increase took place in the last three years, reflecting an accelerated asset growth, more activities undertaken in-house, and a substantially more complex investment policy.

The CPPIB Act imposes rigorous public accountability, including a transparent investment policy, a detailed annual report that must be publicly available, audited financial statements, quarterly performance reports, and public meetings at least once every two years in each participating province. In addition, the federal Minister of Finance can order a special audit at any time, while a special examination of the Investment Board's systems and practices must be undertaken at least once every six years. Finally, the triennial actuarial review of the CPP provides another opportunity for assessing the contribution of the Investment Board to the financial standing of the CPP.

3.4 Investment Policy Objectives and Strategic Asset Allocation

The board of directors is responsible for approving the investment policy of the CPPIB and the strategic asset allocation. It is required to consider factors that may affect the funding of the CPP and its ability to meet its long-term pension liabilities. The investment policy addresses the asset mix, asset diversification, expected investment returns, risk management and liquidity, and the use of derivative products. In setting the strategic asset allocation, the CPPIB is required to take into account the bond portfolio of the CPP, that at one time resided with the FDF. Senior management plays a key role in initiating regular reviews of asset allocation strategy and making recommendations to the board of directors for its approval.

The asset allocation strategy has been influenced by two crucial federal regulations. The first has been the limit imposed on foreign investments by the foreign property rule. A 20 percent limit applied in 1999 but this was raised to 25 percent in 2000 and 30 percent in 2001, before being completely removed in June 2005. These limits applied to all Canadian pension funds and other tax-deferred retirement plans. The CPPIB allocated about 30 percent of total assets in foreign equities in 2006 and raised this further to 40 percent in 2007. Adding other foreign assets, the total foreign exposure reached 45 percent in 2007, up from 36 percent a year earlier.

The second regulation has concerned the right of provincial governments to roll over maturing bonds for another 20-year term. In 2001, the provinces were allowed to redeem their bonds earlier than their maturity dates and transfer the proceeds to the CPPIB. This contributed to an acceleration of the release of funds that had been locked into long-term non-tradable bonds.

A major change occurred in 2004 when the CPPIB was given responsibility for cash management of the CPP, investing liquid funds in money market securities and releasing funds to CPP as needed for the payment of current benefits. A decision was also taken to transfer all bond holdings, even those that had been rolled over, to the CPPIB within a three-year period ending in April 2007.

To offset the dominance of the CPP's fixed-income securities, the CPPIB initially adopted a policy of investing in equities 100 percent of its cash flows. It was originally required to adopt a passive management style and invest in stock index funds. But already in 2000 this restriction was relaxed and the CPPIB was allowed to invest up to 50 percent in individual stocks. After reviewing its asset allocation strategy in 2001, investment management evolved from solely passive to partially active investing. This was motivated by a desire to reduce exposure to one company (Nortel Networks) that accounted at the time for 35 percent of the Toronto index (TSE 300). Private equity and real estate investments were undertaken in 2002 through participation in limited partnerships and pooled funds.

In fiscal 2003, all passive management was brought in-house, while customized indexing was introduced. This allowed investments in small capitalization Canadian companies. In fiscal 2004 external managers were retained for an active overlay program. At the same time, it was decided to move from an investment model by geographic regions to a model based on global economic sectors. The diversification into private equity, venture capital opportunities and real estate investments that began in 2002 was gradually expanded.

In fiscal 2006 a fundamental and detailed strategic review was undertaken by senior management with board participation at key stages. The board and management decided to design a portfolio to capture risk-adjusted returns in excess of passive market returns and to measure excess returns against a Reference Portfolio invested passively in traditional asset classes. This decision reflected the view that future passive investment returns would be insufficient to meet the requirements of the fund.

The new Reference Portfolio is based on public indices and consists of 40 percent global equities, 25 percent Canadian equities, 25 percent fixed income, and 10 percent real return bonds. It replaced the customized benchmarks, the use of which was no longer needed following the removal of all restrictions on foreign investments.

The new investment strategy extended the gradual transition from passive to active management and culminated in what amounts to a complete reversal of the early emphasis on passive investment. The new approach implied a significant expansion of investments in alternative asset classes, including real estate and private equity.

The CPPIB is now actively seeking to expand its internal active management, engaging in both traditional value-added management and short-horizon trading strategies. In its private equity investments, it is not merely acting as a passive investor in private equity funds but is also involved as a principal investor alongside other fund managers. A prominent initiative in this area was its recent involvement in the takeover battle over Bell Canada between competing groups of institutional investors and private equity funds.

The CPPIB is also acting as a principal investor in several other private equity investments, including in markets overseas. It intends to follow a similar approach in infrastructure projects, acquiring ownership rights in toll roads, airports, electrical transmission networks and water distribution systems, both as a passive investor in infrastructure funds and as a principal investor. Its involvement in real estate projects has also evolved into owning controlling stakes of between 50 to 80 percent in office buildings, shopping malls and retirement homes. The new policy was actively pursued during fiscal 2007 and is likely to be intensified further in the future.

The CPPIB adopted in 2005 a responsible investing policy. This recognizes that responsible corporate behavior with respect to environmental, social and governance factors can have a positive influence on long-term financial performance. The CPPIB joined the UN-sponsored Principles of Responsible Investment and also belongs to the Canadian Coalition for Good Governance and the International Corporate Governance Network.

3.5 Implementation of Investment Strategy

Implementation of the investment strategy is the responsibility of executive management. Initially, reflecting the emphasis on passive investment and the small complement of staff, an external manager was retained to replicate the Toronto Stock Exchange 300 Index, while a second fund manager was hired to replicate the S&P 500 Index in the US and the EAFE Index overseas. Complying with investment regulations, 80 percent of new funds were invested in Canadian equities and 20 percent in foreign equities.

In 2003 responsibility for passive investing in public equities was transferred to internal managers. Customized indexing was adopted to include a broader selection of stocks and allow investments in small capitalization firms that were excluded from existing market indices. Public equities were transferred from pooled and mutual index funds managed by external managers to a segregated own account with a new custodian. Transition managers were retained to assist in investing large amounts of cash in domestic and foreign markets with minimal market impact. The CPPIB began using a conventional derivatives program, including equity index swaps and futures, to manage risk, enhance returns, and provide liquidity. It also participated in a securities lending program to enhance investment returns.

In 2004 a review of the strategic direction was undertaken. This was a response to the growing need to develop successful active management strategies, including new benchmarks and risk management, to deal with the anticipated quadrupling of assets under management. It was decided to adopt customized indexing by economic sector rather than geographic region. Twelve global economic sectors were identified. The new policy was prompted by the over-representation of some sectors in the Canadian equity market (financial services, energy) and the under-representation of other sectors (health-care).

External managers were appointed to implement an innovative active overlay strategy. The contracts for external managers are based on performance fees that involve a small basic retainer fee and a share of profits over agreed benchmarks. The criteria for selecting the external managers of the active overlay program include extensive expertise, excellent risk management, clearly articulated investment processes, and proven ability to handle a large and growing investment mandate. The CPPIB maintains relationships with well over 70 private investment, real estate and infrastructure groups.

A major expansion of staff took place in the last three fiscal years reflecting the new responsibilities, e.g., cash and liquidity management for CPP, and the new emphasis on active management, trading capabilities, and principal investing. Several vice presidents have been appointed and new groups have been created to manage active strategies in the three investment departments that had been established in earlier years. Staff expansion is likely to continue in fiscal 2008 and beyond.

3.6 Investment Performance

The share of CPP assets managed by the CPPIB increased steadily over the years (Table 3.2). All CPP assets were effectively transferred to the CPPIB by the end of March 2007.

Table 3.2: Asset Composition, CPPIB and FDF, 2000-2007

End March percent of total	2000	2001	2002	2003	2004	2005	2006	2007
CCPIB Assets	5.4	14.8	26.7	31.5	46.5	72.1	90.4	99.4
FDF Assets	94.6	85.2	73.3	68.5	53.5	27.9	9.6	0.6

Source: CPPIB Annual Reports

Asset allocation reflected the legacy of a large volume of non-tradable government bonds on the books of CPP and the decision to invest all new cash flow in equities. Fixed-income instruments declined from 95 percent of the total in 2000 to 25 percent in 2007. Public equities in Canada and overseas reached 58 percent in 2007, while alternative assets, including private equity, real estate and infrastructure projects reached nearly 14 percent in 2007 (Table 3.3). This is likely to increase further in the future both because of past commitments that are gradually reaching the realization stage and because of increased emphasis on such investments. Inflation-linked bonds made up 3 percent of total assets.

Table 3.3: Asset Allocation of CPP Assets, 2000-2007

End March percent of total	2000	2001	2002	2003	2004	2005	2006	2007
Public Equities	5.4	14.7	25.9	28.1	42.7	56.2	58.5	57.9
Private Equities	0.0	0.0	0.7	2.7	2.6	3.6	4.5	6.9
Real Estate	0.0	0.0	0.0	0.5	1.0	1.0	4.3	4.9
Inflation-Linked Bonds	0.0	0.0	0.0	0.0	0.0	0.0	4.1	3.3
Infrastructure	0.0	0.0	0.0	0.0	0.0	0.2	0.3	1.9
Bonds	80.4	72.7	60.8	55.8	42.8	35.2	27.8	25.0
Cash & Money Market	14.2	12.7	12.5	12.9	10.9	3.8	0.6	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: CPPIB Annual Reports

Investment returns for all CPP assets, including the non-marketable bonds that originally resided with the FDF and the assets managed by CPPIB, averaged 8.2 percent over the period 2000-2007. The returns exhibited significant fluctuation from year to year, reflecting the high volatility of returns of global equity markets (Table 3.4).

Table 3.4: Investment Returns on CPP Assets, 2000-2007

Fiscal Years percent	2000	2001	2002	2003	2004	2005	2006	2007
CPP Assets	3.2	7.0	4.0	-1.5	17.6	8.5	15.5	12.9

Source: CPPIB Annual Reports

Annual data on excess returns over the benchmark portfolio show that very large excess returns of the order of 8 percent were realized in 2001 (Table 3.5). This is explained by the decision to reduce exposure to Nortel Networks that accounted at the time for 35 percent of the Toronto market and whose share price collapsed when the bubble burst. Excess returns were substantially negative in 2004 and 2006, but rebounded strongly in 2007, when they reached 2.5 percent of assets.

However, the benchmark used for the 2007 calculation is the new simplified Reference Portfolio, which is not designed to reflect the full riskiness of the actual portfolio. A Risk/Return Accountability Framework is used to measure excess returns, net of fees, on a risk-adjusted basis. However, it is not clear how the volatility of excess returns on investments in private equity, real estate and infrastructure is taken into account. Over the whole period, excess returns equaled 0.9 percent (90 basis points). If the special result of 2001 is not taken into account, the average excess return becomes a negative 0.1 percent (minus 10 basis points).

Table 3.5: Excess Returns, 2000-2006

Percent of assets	2000	2001	2002	2003	2004	2005	2006	2007
Canadian Equities	-0.2	10.9	1.2	0.2	-2.7	0.2	-2.6	n/a
Foreign Equities	0.5	0.7	0.5	0.4	-5.0	1.8	-0.7	n/a
Real return assets			1.5	-59.9	35.2	1.1	-7.0	n/a
Nominal Fixed Income						-0.7	-0.8	n/a
Total Portfolio	0.8	8.4	1.0	-0.8	-2.7	0.8	-2.1	2.5

Source: CPPIB Annual Reports

The experience of the past few years suggests the need for a closer examination of the decision to expand active management and engage in principal investing. The performance of the past few years may reflect both large initial expenditures and delayed realization of potential gains. However, such patterns need to be analyzed and evaluated carefully and to be closely monitored.

Unlike the NBIM in Norway, the CPPIB does not document the contribution of internal and external management to the generation of excess returns over the benchmark targets. This may reflect the growing focus on alternative asset classes, which involve high upfront investment management expenses.

In practice, investment expenses, including external management fees, are included in the capital cost of projects. Public securities are marked-to-market on a daily basis, but assets that are not traded on public markets are subject to ‘fair value’ accounting on a quarterly or annual basis. Fair values are obtained from external managers and are based on discounted flows of future income. Any difference between book and fair values is reflected in unrealized gains. Thus, the CPPIB effectively deducts management expenses from investment income. The same approach is followed with trading commissions paid to brokers. The result of this approach is to understate both investment returns and operating costs.

Documenting the contribution of different strategies to excess returns deserves detailed consideration in view of the claims that active management, investing in alternative assets, as well as principal investing are all crucial for enhancing the investment returns and achieving excess returns over passive investment in public markets.

The operating costs of the CPPIB have increased in absolute dollar terms as a result of the huge growth of assets under management and the expansion of staff. Although they declined in relation to total assets up to fiscal 2006, they rose in 2007 (Table 3.6). However, external management expenses for public markets as well as private equity, real estate and infrastructure have been much higher relative to average total assets. Trading commissions paid to brokers were very high in 2006 because of the realignment of the portfolio of public equities.

At first sight, the operating costs of the CPPIB appear low and comparable to those of the most efficient pension fund management institutions around the world, like the TSP in the US, ATP in Denmark, or the NBIM in Norway. In reality, however, total operating costs are much higher than the costs of these other institutions. First, internal operating cost rose to 11 basis points in 2007, implying a higher cost function. Second, and more importantly, the costs of these other institutions include investment fees paid to external managers. Total external management fees and trading commissions of the CPPIB are deducted from investment income. They amounted to around 20 basis points in the last couple of years, but equaled nearly 35 basis points in 2003. Adding external management fees and trading commissions to total operating costs raises their level to between 28 and 42 basis points over the last 5 years.[24]

Table 3.6: Operating Expenses in relation to CPPIB Managed Assets, 2000-2007

Fiscal Years in basis points	2000	2001	2002	2003	2004	2005	2006	2007
Operating Costs	27.5	12	9	7	7	7	7.1	11.1
Public Mrkts Ext Exp	2.5	3.1	2.8	1.1	0.3	3.6	4.1	1.0
Private Equity Fees*			8.4	29.6	25.4	15.3	11.8	12.8
Private Real Ext Fees*				0.2	1.7	1.0	0.8	1.5
Infrastructure Fees*					0.1	0.4	0.7	0.5
Total Extern Fees*	2.5	3.1	11.2	30.9	27.6	20.3	17.4	15.8
Trading Commissions*			3.7	3.8	5.6	2.4	3.8	3.8

Source: Own calculations on reported CPPIB data

[24] It should be noted that reported operating costs of most pension funds do not include investment management fees charged indirectly for participations in investment funds.

3.7 Concluding Remarks

The CPPIB operates with a robust governance structure that emphasizes two important principles: independence from government (and the implied insulation from political pressures); and full public accountability and transparency. The first principle is fulfilled by using a unique two-stage process in the selection of board directors. Candidates are first identified by a nominating committee and then selected by the government. Public accountability is served by a high level of transparency and public disclosure and by independent reviews and examinations.

Initially, the CPPIB operated with a small staff of investment professionals and outsourced investment management. As assets grew, external passive management was replaced by an internally managed passive portfolio. Gradually, the portfolio was further diversified into private equity and then real estate, infrastructure and inflation-linked bonds. An externally managed active overlay program was also introduced to improve the risk/return profile. The growth in assets and complexity necessitated a large expansion in staff as well as management systems.

In fiscal 2006 a major shift in investment philosophy was articulated. The CPPIB decided to expand its internal active management in both the Canadian and US equity markets, build a short-term trading capability, and expand its role as principal investor in private equity ventures and corporate restructurings. The new approach is predicated on the long investment horizon of the fund and a high level of risk tolerance. It has implied a large expansion of staff and significant increase in staff costs and executive compensation as well as a major growth of investment expenses. Other large public pension funds, such as the Ontario Teachers Pension Plan (OTPP) and the Caisse de Dépôt et Placement du Québec (CDPQ), have reached similar conclusions and have adopted a similar approach. In fact, OTPP was a leading member of the group of investors that won the Bell Canada takeover battle, while CDPQ was for a while a member of the CPPIB group, but withdrew before the battle was over.

The new approach entails a very significant change in the economic role played by public pension funds. The current operations of the CPPIB are very different from those envisaged by its original creation as a single-purpose corporation dedicated to increasing the long-term value of CPP assets through prudent investments. The full implications, likely benefits, potential risks and possible complications of the new approach need to be closely monitored and evaluated in a wide public forum.

4. Ireland: The National Pensions Reserve Fund

4.1 Objectives

The National Pensions Reserve Fund (NPRF) and an independent NRPF Commission were created in 2000 to manage assets to meet the growing financial pressures of demographic aging. The purpose of the fund is to partially prefund the cost of social welfare pensions and public service pensions to be paid from 2025 until at least 2055.

The pension support ratio in Ireland is projected to fall from 5.25 contributors for each pensioner at present to 3.4 in 2025 and 1.8 in 2055. This decline is less pronounced than in the majority of EU countries but even so the cost of social welfare pensions was expected to rise, if social pensions remained indexed to wages, from 4.8 percent of GDP in 1999 to 8 percent in 2056 (Maher 2004). In addition, the government is facing a rapidly rising cost of public service pensions. In response to these likely future financial pressures from demographic aging, the Irish authorities decided to build a fund that would be able to meet about one-third of the cost of public pensions (social welfare and public service) between 2025 and 2055 and possibly beyond. The fund is designed to underpin the long-term sustainability of existing pension arrangements.

4.2 Funding Sources

The NPRF is funded with annual government contributions (1 percent of GNP) and privatization proceeds. Irish public debt was substantially reduced during the 1990s. It now amounts to around 20 percent of GDP. The policy choice facing the Irish authorities lied between reducing further the level of public debt and creating the new fund. The authorities decided in favor of the latter because the level of the debt was already low, a certain presence of the Irish government in the European debt market was desirable, and creating the new fund could be beneficial both in buttressing confidence in the future of public pensions and in generating financial returns in excess of the financial costs of public debt.

Table 4.1: Total Assets of the NPRF, 2001-2006

end December	2001	2002	2003	2004	2005	2006
Annual Transfers (bn EUR)	7.5	1.0	1.1	1.2	1.3	1.4
Percent of GNP	7.7	1.0	1.0	1.0	1.0	1.0
Percent of GDP	6.4	0.8	0.8	0.8	0.8	0.8
Total Assets (bn EUR)	7.7	7.4	9.6	11.7	15.4	18.9
Percent of GNP	7.9	7.1	8.6	9.5	11.4	12.6
Percent of GDP	6.6	5.7	6.9	7.9	9.6	10.8

Source: NPRF and IFS

The first transfer of funds was made in April 2001. It included 6.5 billion EUR that had been accumulated in a temporary holding fund pending the creation of the NPRF. At the end of the first nine months of operation in December 2001, total assets amounted to 7.7

billion EUR, equivalent to 7.9 percent of GNP (or 6.6 percent of GDP).[25] Total assets reached 18.9 billion EUR at the end of 2006 (Table 4.1), corresponding to 12.6 percent of GNP (or 10.8 percent of GDP).

4.3 Institutional Structure and Fund Governance

The NPRF is managed by a Commission that has been established as a body corporate with absolute discretion to control, manage and invest the assets of the fund, acting through the Manager.

The Commission has the right to appoint the manager of the fund and delegate to the manager any of its functions as it considers appropriate or expedient. The Commission also appoints investment managers, custodians, consultants and other service providers. The Commission was required by the National Pensions Reserve Fund Act, 2000 to appoint the National Treasury Management Agency (NTMA) as the first executive manager of the fund for a period of 10 years. The management expenses of the NTMA are covered by the Ministry of Finance but all other expenses are charged to the NPRF. Following this first period, and acting in consultation with the Minister and with his or her consent, the Commission may appoint the NTMA or any other firm to act as manager for a five-year period.

The Commission consists of seven commissioners, who are appointed for staggered terms. The commissioners must be 'fit and proper' persons. The act specifies that the Minister shall appoint persons to be commissioners who have acquired substantial expertise and experience at a senior level in a broad range of areas, including investment or international business management, finance or economics, law, actuarial practice, accountancy and auditing, civil service, trade union representation, pension industry, and consumer protection. There is no requirement for a balanced composition in terms of background and expertise, although the minister is required to ensure an equitable balance between men and women in the composition of the Commission. Despite the fast growing complexity of financial instruments and strategies, there is no requirement that a sufficient number of commissioners should have adequate knowledge of the potential benefits and risks of such products and practices.

The commissioners are appointed by the Minister of Finance for five-year terms and can only be removed for just cause. Four of the first ordinary members of the Commission were appointed for shorter three and four-year terms to allow a staggering of future appointments. The Chief Executive of the NTMA is an ex officio member of the Commission. Three of the other six founding commissioners were foreign nationals. Apart from the ex officio member, all other commissioners cannot serve more than two consecutive terms of office.

[25] Because of the presence in Ireland of a large number of multinational companies, GNP fluctuates between 80 and 85 percent of GDP, after deducting net income earned by foreigners. The 1 percent of GNP annual contribution from the budget corresponds to 0.8 percent of GDP.

In addition to formulating the investment policy objectives and setting the strategic asset allocation, the Commission is also required to conduct, from time to time, an assessment of the projected profile of public outlays on pensions.

The accounts of the fund must be audited by the Comptroller and Auditor General. The Commission is required to publish an annual report of its activities and of the audited accounts of the fund. The annual report must include information on investment strategy, investment return, asset valuation, investment management and custody arrangements, fees, commissions and other expenses incurred by the Commission and the Manager.

As part of its fund governance guidelines, the Commission appointed a formal Audit Committee in 2002. The firm of PricewaterhouseCoopers was appointed to carry out an internal audit of the fund with special emphasis on the controls in place in the custodian and the NTMA. The results of this audit, which were received in April 2003, were satisfactory and were forwarded to the statutory auditor of the fund. Fund guidelines require full disclosure of conflicts of interest and abstention from voting in those cases. The Ethics in Public Office Act, 1995 has been applied to the Commission and the NTMA with effect from the beginning of 2005.

Two additional committees were created in 2005: the Property Investment Committee to advise the NTMA on real estate investments and monitor implementation of the agreed program; and the Private Equity Investment Committee, with similar duties in connection with private equity investments. The first of these committees has four members (two commissioners and two external members), while the second has six members (four commissioners and two external members).

Special emphasis is placed on monitoring and controlling both financial (market) and operational risks. To this end, the NTMA has installed information technology systems and developed detailed control procedures in line with industry best practice. Tracking error is closely monitored on a daily basis at both fund and individual manager level. However, investments in private equity, property and pooled funds are excluded from the calculation of the tracking error limit. Work is under way to include these asset classes in the risk budgeting framework.

A comprehensive range of controls has been put in place to minimize operational risk. Implementation of the controls is monitored by the NTMA's Internal Control Unit (ICU). PricewaterhouseCoopers supplements the work of the ICU, while the Commission's Audit Committee is also actively involved in ensuring the effectiveness of internal controls.

The Chairperson of the Commission is required to appear before and give evidence to the Committee of Public Accounts of the Irish Parliament on fund policies and performance, while the Chief Executive of the Manager (NTMA) is also required to give evidence to the Committee on the regularity and propriety of all transactions on the fund and on the economy and efficiency of the Commission and the Manager in regard to the expenses of operation of the fund.

In April 2006, the Commission joined a group of over 30 large institutional investors in signing the Principles of Responsible Investing that have been sponsored by the United Nations. The aim of the principles is to integrate consideration of environmental, social and governance issues into investment decision-making and ownership practices and thereby improve long-term returns.

4.4 Investment Policy Objectives and Strategic Asset Allocation

The Commission is responsible for setting the strategic asset allocation of the fund. It is required to invest the assets with a view to securing an optimal return but subject to an acceptable level of risk. It is not allowed to invest in Irish government securities. Taking into account its long investment horizon, resulting from the provision that there will be no withdrawals from the fund for 25 years, the Commission adopted as its investment policy objective the maximization of the terminal wealth of the fund.

Following a competitive bidding organized by NTMA, the Commission hired an external consultant, Mercer Investment Consulting Limited, to advise on setting its asset allocation strategy. The consultant advised and the Commission accepted a broad allocation of 80 percent equities and 20 percent bonds. A benchmark portfolio was then created that consisted of 40 percent Eurozone equities, 40 percent non-Eurozone equities (split between 26.4 percent US, 6.8 percent Europe ex Eurozone, 5.2 percent Japan and 1.6 percent Pacific Basin) and 20 percent Eurozone bonds.

The eurozone market was chosen as the domestic market both because of Ireland's adoption of the euro and because the Irish equity market is too small, accounting for less than 1 percent of global equities. Interestingly, the benchmark did not include an allocation to emerging markets. However, the Commission initiated a study to examine the appropriateness of including emerging markets and some other asset classes, such as small capitalization quoted equities, property, private equity and corporate bonds. Following Mercer's advice, the Commission also decided to adopt a currency overlay strategy and hedge half of the non-Eurozone foreign currency exposure.

The Commission then considered the choice between active and passive management. It opted for a mixed approach that allocated 15 percent in passive bond management, 5 percent in active bond management, 37 percent in passive equities, and 43 percent in active equities. Active equity managers were given considerable leeway with tracking error targets of between 5 and 6 percent. However, the overall expected tracking error was calibrated to stay within 1.25 percent on an annual basis.

In 2003, following a detailed review, the Commission approved mandates for small cap equities and corporate bonds and made fund allocations to property and infrastructure projects. The Commission also approved investing in private equity. A total of 4 percent was allocated to real estate, 2 percent for Eurozone corporate bonds and 2 percent for small caps. No decision was made to allocate funds to emerging markets.

In 2004, a further review of asset allocation strategy resulted in an increased allocation to alternative asset classes, including real estate, private equity and commodities, of up to 18 percent of total assets. The objective was to increase the fund's potential long-term return without substantially changing its risk profile. The Commission also decided to increase its small cap allocation from 2 to 4 percent and to allocate 2 percent to emerging market equities.

After reviewing the assumptions underpinning the strategic asset allocation, the Commission introduced in 2006 slight adjustments to the targets adopted for 2009 (Table 4.2). The main adjustments included a reduction in large cap equities and an increased allocation to emerging markets. The latter underscores the opportunities for higher returns offered by these markets but also recognizes the progress made by many developing countries in promoting financial stability and strengthening the regulation and supervision of their financial markets.

Unlike public pension funds in Canada, the Commission has not advocated engaging in principal investing or short-term trading. Much of the portfolio in bonds and large caps continues to be passively managed, while investments in alternative classes are made through investment funds.

Table 4.2: Strategic Asset Allocation: 2009 Targets

percent	2004 Review	2006 Review
Large Cap Equity	63	56
Small Cap Equity	4	5
Emerging Markets Equity	2	5
Total Quoted Equity	69	66
Private Equity	8	10
Property	8	8
Commodities	2	2
Total Alternative Assets	18	20
Bonds	13	13
Currency Funds		1
Total Monetary Assets	13	14

Source: NPRF

4.5 Implementation of Investment Strategy

The appointment of NTMA as the operational manager of the fund is a natural choice for the NPRF. The NTMA is responsible for managing the public debt of Ireland with the objective to minimize the cost of public debt subject to a prudent level of risk. This is very similar to asset management objective to maximize the investment return subject to a prudent level of risk. The NPRF is not allowed to invest in Irish government securities and thus there is no direct conflict of interest between the two main functions of the NTMA. When investments in infrastructure projects are considered, proper Chinese walls are put in place between the managers of the NPRF and the managers of infrastructure projects.

Following the appointment of NTMA as manager and the selection of Mercer Investment Consulting Limited as external consultant on asset allocation strategy, the Commission considered the appointment of external asset managers. It was decided, following the advice of the external consultant, to seek to employ specialist asset managers, dealing with a particular asset class, rather than appoint balanced managers that would deal with multiple asset classes.

The Commission also decided to appoint 15 external asset managers, while delegating responsibility for the passive bond management and the currency overlay program to the NTMA. The NTMA was instructed to organize a competitive tender under EU public procurement rules for the selection of external asset managers. A special electronic tendering website was created because of the anticipated large volume of interest. In total, the Commission received 581 expressions of interest from some 200 managers. Respondents had to complete a detailed questionnaire that had been designed by the NTMA in consultation with Frank Russell Company.

The next stage in the selection process was the dispatch of 178 invitations to tender to some 100 managers. The selection criteria included strength of the firm, resources, caliber of participating individuals, relevant experience, quality of risk control framework, quality of administration and reporting, ability to manage conflicts of interest, level of fees, historical performance, ability to meet investment objectives, and terms of required legal agreement or contract. 158 valid tenders were received and following a rigorous evaluation the Commission proceeded to award 15 external mandates. The whole process took several months. Pending the selection of external managers, the assets of the fund were held in bank time deposits.

The Commission also appointed a transition manager, whose function is to purchase in an efficient and cost effective manner on behalf of the fund the securities required by the individual asset managers. This approach allows a detailed monitoring of market entry costs. It permits the achievement of economies of scale through the use of block purchases and also seeks to minimize the costs of market impact through careful timing of the execution of trades. Following a competitive tender, Watson Wyatt was appointed to advice on the selection of transition manager. After a two-stage process similar to that adopted for the selection of asset managers, Morgan Stanley International was appointed as transition manager.

A further competition was held under the restricted procedure of the EU Public Procurement Directive for the appointment of a global custodian who is responsible for the safe custody of all assets, independently of the investment managers. ABN Amro Mellon was appointed as global custodian. Its services include transaction settlement, safekeeping, collection of income, claiming of tax refunds, cash sweeps, fund accounting and reporting, and securities lending.

The Commission also participates in a commission recapture program administered by Frank Russell Securities. Under this program, asset managers are requested, subject to best execution, to carry out a portion of their trades through a network of participating brokers, who refund some of their commission income to the NPRF.

Close monitoring of the performance of external managers is ensured by the development of a sophisticated system of reporting and measurement of risks and returns that complements the work of the custodian. Formal review meetings of external asset managers are held by the NTMA and the latter's opinion is then considered by the Commission. During 2003, one mandate was terminated.

The Commission made considerable progress in 2004 and 2005 implementing the revised investment strategy that emphasized increased allocations in small caps, private equity, real estate and commodities. New mandates were awarded following the same competitive process as with the original appointments.

Much of the portfolio, covering half of the large cap allocation, is passively managed. But active management, especially for less liquid assets, is growing. This has resulted in the payment of increasing management fees to external managers.

4.6 Investment Performance

In 2001 all assets were invested in cash. Implementation of the strategic asset allocation was slowed down in 2002 because of adverse market conditions. Thus, at the end of 2002 57 percent was invested in real assets and 43 percent in monetary assets compared with the long-term target of 80/20 in real and monetary assets. Considerable progress was made in 2003 in aligning the portfolio composition to the long-term strategic objectives.

Real assets now account for just over 80 percent of assets (Table 4.3). Alternative assets amount to nearly 5 percent of assets compared to the target of 20 percent by 2009. Rather surprisingly, bank deposits continue to represent over 5 percent of assets. The equity portfolio is equally divided between Eurozone and global equities. Investments in Irish equities are less than 1 percent of total assets. Investments in Irish government bonds are not allowed; all investments in government bonds are in bonds of other Eurozone countries.

Table 4.3: Asset Allocation, 2001-2006

end December percent	2001	2002	2003	2004	2005	2006
Equities		56.8	70.8	76.1	77.9	75.7
Commodities					1.3	1.1
Property					0.6	3.2
Private Equity						0.5
Government Bonds		17.6	14.6	12.8	11.7	12.7
Corporate Bonds						0.5
Foreign Currency Funds						0.5
Bank Deposits	100.0	25.7	14.6	11.1	8.4	5.8
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: NPRF

Investment returns fluctuated considerably from year to year, reflecting the large volatility of equity market returns in the first decade of the new millennium (Table 4.4). The fund achieved a substantial excess return over its benchmark in 2001 and 2002 mainly because of the delay in implementing its asset allocation strategy. This was partly caused by the long procedure imposed by EU regulations on public procurement, which delayed the selection of managers and the investment of cash during 2001. But it was also partly due to a deliberate decision to invest the funds slowly during 2002 because of the unsettled market conditions that prevailed at that time. Excess returns were highly negative in 2003 and 2004, but were close to zero in the last two years.

Table 4.4: Investment Returns by Asset Class, 2001-2006

percent	2001	2002	2003	2004	2005	2006
Equities		-29.6	18.1	10.4	26.9	14.0
Bonds		10.7	4.2	11.3	8.9	-2.1
Property						27.0
Private Equity						4.9
Commodities					25.9	-23.9
Cash	3.3	3.4	2.4	2.1	2.1	3.0
All Assets	3.3	-16.1	12.8	9.3	19.6	12.4
Benchmark	-3.5	-21.6	16.6	11.2	20.1	12.2
Excess Returns	6.8	5.4	-3.8	-2.9	-0.5	0.2

Source: NPRF

The annualized average rate of return over the whole period 2001-2006 amounted to 6.5 percent. This exceeded inflation by a comfortable margin. The real rate of return was 4.2 percent. The overall average excess return amounted to 1.4 percent (140 basis points), though as just noted, this was the result of the fortunate delay in implementing the investment strategy.

Equity returns averaged 5.8 percent, which was slightly below the 6.5 percent earned by the bond portfolio. However, in the long run, equities are likely to earn significantly more than bonds. Alternative asset classes, especially private equity and real estate, are expected to make a large relative contribution to investment income in the longer run. However, these asset classes incur high upfront expenses and thus it will be some time before their full results are realized.

Operating expenses, including the expenses of NTMA, increased over time and amounted to 21 basis points in 2006 (Table 4.5). The combined Commission and NTMA expenses ranged between 6 and 7 basis points and are comparable to management expenses of other large pension funds. However, external management fees look high at over 15 basis points. Investment management fees charged indirectly through participation in investment funds are not included in reported fees but are deducted from reported investment returns.

Table 4.5: Operating Expenses, 2001-2006

basis points	2001	2002	2003	2004	2005	2006
External Management Fees		7.3	14.1	15.5	15.9	14.6
Commission Costs	1.4	3.6	3.2	2.1	3.3	2.8
Total NPRF Costs	1.4	10.9	17.3	17.6	19.2	17.4
NTMA Expenses	2.7	3.1	3.9	3.3	3.5	3.4
Total Operating Costs	4.1	14.0	21.2	20.9	22.7	20.8

Source: NPRF

The NTMA employs 17 people to run the operations of the fund. The Commission does not have any staff but incurs all expenses related to IT systems, custodians, consultants, legal fees and the fees and expenses of commissioners.

4.7 Concluding Remarks

The NPRF has been created with a strong governance structure. It is managed by a small independent Commission of experts rather than representatives of stakeholders. The Commission has absolute discretion to control, manage and invest the assets of the fund, but is required to consult with the Minister and obtain his or her consent in the appointment of the manager. The appointment of the NTMA as first manager for ten years was required by the Act that created the fund.

The Commission is responsible for formulating the investment policy objectives and setting the strategic asset allocation of the fund. Taking into account its long investment horizon, it has set a broad allocation of 80 percent equities and 20 percent bonds. The eurozone market was chosen as the domestic market. Thus, investments in Irish equities account for less than one percent of assets, while the fund is not allowed to invest in Irish government securities. The equity portfolio is equally divided between Eurozone and global equities, while half of the foreign currency exposure is hedged.

Active management is used for half the portfolio. External asset managers are used for specialized mandates. The Commission also appointed a transition manager and a global custodian. It participates in both securities lending and recapture of broker commissions. The asset allocation strategy has been refined over time, increasing allocations to emerging markets (5 percent) as well as alternative assets (20 percent). However, the Commission has not advocated engaging in either principal investing or short-term trading.

5. New Zealand: The New Zealand Superannuation Fund

5.1 Objectives

The New Zealand Superannuation Fund (NZSF) and the Guardians of the NZSF were established in October 2001 by the New Zealand Superannuation Act 2001. The aim of the fund is to partially fund the universal public pension that is paid by the government to all old-age persons residing in New Zealand. The accumulation of the fund and its use during the payout phase will offset the steep increase in the cost of the universal pension, particularly after 2020. The fund will thus smooth out the financial burden on the budget from the impact of demographic aging on the universal pension scheme.

The government decided to set aside substantial capital contributions for the fund over the ensuing twenty years. As a result, the fund is expected to grow to around 100 billion NZD by 2023, after which date funds may be withdrawn to meet part of the increased cost of universal pensions. With public debt amounting to only 14 percent of GDP, New Zealand, like Ireland and Norway, did not face a difficult policy dilemma in deciding to create the fund. If anything, creating the fund and investing in global assets is likely to earn a higher rate of return than the interest cost of the public debt.

5.2 Funding Sources

The NZSF is funded by annual government contributions. These vary from year to year and depend on a formula that calculates annually the required contribution for meeting the financial objective of the fund. This is not the maintenance of a particular funding ratio but the smoothing out of the annual cost of universal pensions. Instead of doubling the annual cost would rise by half if the fund policies are successful (McCulloch and Frances 2004). The contribution rate reached 1.5 percent of GDP in 2006. The first transfer of contributions was made in October 2003. This included funds that had been set aside in fiscal 2002 and 2003 in anticipation of the creation of the fund.

Table 5.1: Total Assets of the NZSF, 2004-2006

end June	2004	2005	2006
Annual Transfers (bn NZD)	3.8	2.1	2.3
Percent of GDP	2.5	1.3	1.5
Total Assets (bn NZD)	4.0	6.6	10.1
Percent of GDP	2.7	4.2	6.3

Source: NZSF and IFS

Total assets of the NZSF rose from 4 billion NZD (or 2.7% of GDP) in June 2004 to 10 billion NZD, corresponding to 6.3% of GDP in June 2006 (Table 5.1). The growth of assets also reflected the high level of net investment returns. As the fund was created after the recovery of global equity markets from the bursting of the high tech bubble in the spring of 2000, its investment returns have been much higher than those reported by the other three funds examined in this paper.

5.3 Institutional Structure and Fund Governance

The Board of Guardians consists of six professionals who are appointed by the government after a proposal by an independent nominating committee. The first Board was appointed in August 2002. The act specifies that only persons who, in the opinion of the minister, have substantial experience, training and expertise in the management of financial investments, can be appointed to the board.

The Board of Guardians is responsible for investing the fund on a commercial and prudent basis in order to maximize investment returns without incurring undue risks. The Board is charged with investing the fund in a manner consistent with best practice portfolio management.

The Board is required to be transparent in its activities. A formal independent review of the performance of the Board will be carried out at least every five years and be reported to Parliament, while the New Zealand Treasury will monitor its activities on a regular basis. While accountable to government, the Board and the fund operate at arm's length from it. The Act gives the Minister of Finance limited powers of direction on the government's expectations of fund performance, but no such directions have been issued so far.

The Board established 5 board committees. The Audit and Governance Committee is responsible for overseeing the financial reporting of the fund and the establishment of internal risk control policies. There are also board committees on Manager Selection, Responsible Investing, Communications, and Employee Policy and Remuneration. Two of these committees (on Manager Selection and Communications) were eliminated in fiscal 2004.

An independent review of the performance of the fund was carried out in fiscal 2005. This confirmed that the investment policies and operating model of the fund were appropriate. It also concurred with the Board's view to increase the allocation to alternative assets.

The Board is taking steps to enhance the database of fund transactions to ensure future capability for portfolio analysis. It is also formalizing its internal control policies and building a comprehensive risk management plan.

In early 2006, the fund joined the UN initiative on corporate governance and adopted the Principles of Responsible Investing.

5.4 Investment Policy Objectives and Strategic Asset Allocation

The Board is responsible for setting the strategic asset allocation of the fund. It hired an external adviser, Mercer Investment Consulting, in February 2003 to help determine its asset strategy. The report of the adviser was reviewed by the Board, senior management, and a second adviser - Russell Investment Group. The Board also researched the processes and structure of similar funds overseas.

All this research and advice pointed in the same directions. First, international best practice demanded wide diversification of investments across different investment sectors and localities. Second, the best way to maximize long-term returns is to invest a large proportion of the fund in growth assets, such as equities and property. While subject to greater short-term volatility, these assets are expected to substantially outperform over a 20-year period defensive assets, such as cash and fixed-income securities.

The first strategic asset allocation was finalized in July 2003. It emphasized the importance of investing in 'growth' assets and risk diversification. The basic allocation was 80 percent 'growth' assets and 20 percent 'defensive' assets. Allocations to local equities were limited to 7.5% of total assets. However, total assets to be invested in New Zealand, including bonds and property, were targeted at 22 percent. The fund's performance target is set to exceed the risk-free rate of return by 2.5 percentage points (250 basis points) on average over rolling five-year periods.

The asset allocation was reviewed in fiscal 2005 and a decision was taken to expand allocations in alternative assets to 35 percent of total assets (Table 5.2). This implied a move away from listed equities and also required a major effort to create an appropriate infrastructure. Progress was made in establishing specific strategies and appointing specialist advisers.

Table 5.2: Strategic Asset Allocation

percent	2003 Report	2005 Review
NZ Equities	7.5	7.5
Large/Mid Cap	44.5	34.5
Small Cap	12	6.0
Emerging Markets	3	2.0
Total Listed Equities	**67**	50
Property	6	10
Other	7	25
Total Alternative Assets	**13**	**35**
Total Growth Assets	**80**	**85**
NZ Fixed Interest	10	
Global Fixed Interest	10	
Total Defensive Assets	**20**	**15**

Source: NZSF

In addition to expanding the allocation to alternative assets, the fund adopted multi-strategy mandates and started paying performance fees to active managers. During 2006 projects to enhance the risk budgeting framework and to refine strategies for a more effective utilization of active manager risk were completed. The proportion of active risk in the portfolio, while still modest, has been increased. Thus, the NZSF, like the funds in Canada, Ireland and Norway, has followed the same path of starting with a largely passive management and then moving quite rapidly to adopting a more active approach that seeks to raise expected returns while keeping risks under control.

The policy for hedging foreign currency risk has been set at a very high level. In 2006 72 percent of the fund's exposure in global growth assets and 100 percent of the global fixed interest portfolio were hedged back to New Zealand dollars.

5.5 Implementation of Investment Strategy

The Board of Guardians appointed a Chief Executive in March 2003. Management is responsible for implementing the policy set by the Board and overseeing the effective performance of investment managers. A small executive staff is assisting the Board in selecting external managers, custodians and auditors, and monitoring their performance. In fiscal 2005, the total number of staff was 8 full-time investment officers and 3 support staff, up from 9 in fiscal 2004. The number reached 15 in 2006 but was expected to increase to 25 in fiscal 2007.

After appointing the Chief Executive Officer and hiring key staff, the Board established Board committees, selected investment advisors to the fund, appointed legal and tax advisors, and selected BNP Paribas Securities as the fund's custodian to provide safekeeping of the investment assets and settle all transactions. The first investment managers were appointed in September 2003. All appointments were made after a rigorous selection process. 15 managers with 16 mandates were appointed during fiscal 2004.

The number of managers and mandates increased over time in line with the rising complexity of investment policy. In 2006 the fund employed 25 external managers with 34 mandates. The performance of managers is monitored on a daily basis with the assistance of the global custodian. It is reviewed monthly by the Board against such criteria as the performance of their peers and their performance against benchmark returns, depending on the type of asset class they manage.

The benchmarks used for assessing the performance of individual managers state very clearly that they should be based on the asset class for which the individual manager is selected and should reflect the degree of risk adopted by each manager. In contrast, as already noted above, the benchmark of the overall portfolio of the fund against which its performance is assessed has been defined as the risk-free rate of return plus an excess of 2.5 percentage points (250 basis points).

5.6 Investment Performance

Asset allocation changed significantly when the new strategy decided in fiscal 2005 was put under implementation (Table 5.3). Investments in global equities, especially in larger cap equities, declined rapidly from 51 percent in 2004 to 40 percent in 2006. The long-term target of the current strategy is to lower this further to 34.5 percent. The allocation to emerging markets has been reduced in the long-term strategy despite the recent strong performance of emerging markets and the promise of higher returns in the future as developing countries strengthen the regulation of their markets and seek to maintain financial stability. However, for the time being the share of emerging market equities has remained stable at 3.6 percent of total assets.

A major expansion of investments in alternative assets from 3 to 20 percent of the total portfolio took place in fiscal 2006. This is expected to rise further in fiscal 2007 in implementation of the new target of 35 percent for this asset class.

Table 5.3: Asset Allocation, 2004-2006

percent of total assets	2004	2005	2006
New Zealand Equities	**9.9**	**8.4**	**7.6**
Large Cap Global Equities	50.7	43.2	40.2
Small Cap Global Equities	11.2	9.3	8.6
Emerging Market Equities	2.0	3.6	3.6
Total Global Equities	**63.9**	**56.2**	**52.4**
Total Equities	**73.8**	**64.6**	**60.0**
New Zealand Fixed Interest	12.1	16.0	14.4
Global Fixed Interest	14.1	16.1	5.7
Total Fixed Interest	**26.2**	**32.1**	**20.1**
Property		2.9	7.2
Timber			3.6
Infrastructure			3.8
Other Alternative Assets		0.4	5.2
Total Alternative Assets		**3.3**	**19.8**

Source: NZSF

Investments in timber (forestry) and infrastructure grew rapidly in 2006. The first involves the NZSF in a principal capacity.[26] The 2006 annual financial statements report major timber operating expenses, amortization of goodwill, and depletion of forestry

[26] McCulloch and Frances (2004:185) note the NZSF is intended to be a portfolio of financial investments, not an operator of businesses. They also state that section 59 of the NZSF Act precludes it from taking a controlling interest in other entities. It is not clear if the timber operations would classify as a business operation. It is also not clear under what conditions would an expanded involvement in principal investing infringe the spirit of section 59.

assets. However, although these are reported among fund operating expenses, they are in fact properly deducted from the investment income of timber assets.

At the end of fiscal 2006, the private equity program had not yet been set in motion. It is not clear if the NZSF intends to act as a passive investor in private equity funds organized by other investment groups or whether it will follow the example of the CPPIB and become involved as a principal investor.

Fund performance, net of investment management expenses, averaged 14.5 percent since its inception. This exceeded the risk-free rate by 8.3 percentage points and was much better than the target excess return of 2.5 percent over the risk-free rate. The fund projects a nominal return of 9 percentage points over the next 30 years and an excess return of 3.5 percent. Annual results show the usual fluctuation from year to year (Table 5.4).

Table 5.4: Investment Returns, 2004-2006

percent	2004	2005	2006
Return on Assets	10.4	14.1	19.2
Risk Free Rate	5.3	6.3	6.8
Excess Return	5.1	7.8	12.4

Source: NZSF

Because of the young age of the fund and its small size as well as the need to establish computing and information systems, operating expenses relative to average total assets are high by comparison with other large public pension funds. Operating expenses rose to 71 basis points in 2006, up from 28 points in 2004 (Table 5.5). Investment management fees account for the lion's share of expenses. As already noted, the fund deducts these expenses from reported investment income.

Table 5.5: Operating Expenses, 2004-2006

basis points	2004	2005	2006
Manager Fees	11.9	28.8	54.1
Custodian	5.4	9.6	8.5
Other fund expenses	1.9	2.5	3.1
Guardian Expenses	9.2	6.6	5.3
Total Expenses	28.3	47.5	71.1

Source: NZSF

5.7 Concluding Remarks

The NZSF has been created as a state entity with its own independent board and a long investment horizon. The board of directors consists of six professionals who are appointed by the government after a proposal by an independent nominating committee. The board is responsible for investing the fund on a commercial and prudent basis in order to maximize investment returns without incurring undue risks. The NZSF operates with a high level of transparency and public accountability.

The first strategic asset allocation emphasized the importance of investing in ‘growth’ assets and risk diversification. The basic allocation was 80 percent ‘growth’ assets and 20 percent ‘defensive’ assets. Allocations to local equities were limited to 7.5% of total assets, but total assets to be invested in New Zealand, including bonds and property, were targeted at 22 percent. The policy for hedging foreign currency risk has been set at a very high level. Over 70 percent of the fund's exposure in global growth assets and 100 percent of the global fixed interest portfolio are hedged back to New Zealand dollars.

The asset allocation was reviewed in fiscal 2005 and a decision was taken to expand allocations in alternative assets to 35 percent of total assets. In addition to expanding the allocation to alternative assets, the fund adopted multi-strategy mandates and began paying performance fees to active managers. Thus, like the public pension funds in Canada, Ireland and Norway, the NZSF started with a largely passive management and then moved quite rapidly to adopt a more active approach that seeks to raise expected returns while keeping risks under control.

Asset allocation changed significantly following adoption of the 2005 strategy. Investments in large cap equities declined rapidly, while investments in alternative assets rose from 3 to 20 percent of the total portfolio. Investments in timber (forestry) and infrastructure also grew rapidly in 2006. The first of these involves the NZSF in a principal capacity. However, it is not clear if the NZSF intends to act as a principal or passive investor in its private equity investments.

References

Bernstein, Peter L. 2007. *Capital Ideas Evolving.* New York: John Wiley & Son, Inc.

CPPIB. 1999-2007. Annual Reports.

Dimson, Elroy, Paul Marsh and Mike Staunton.2002. *Triumph of the Optimists: 101Years of Global Investment Returns.* Princeton, New Jersey: Princeton University Press.

Hess, David and Gregorio Impavido. 2004. 'Governance of Public Pension Funds: Lessons from Corporate Governance and International Evidence', in Alberto R. Musalem and Robert J.Palacios (eds) *Public Pension Fund Management*, Proceedings of the Second Public Pension Fund Management Conference in May 2003. Washington D.C.: The World Bank.

Iglesias, Augusto and Robert Palacios. 2000. 'Managing Public Pension Reserves: Evidence from the International Experience', Social Protection Discussion Paper Series No. 0003. Washington DC: World Bank.

IMF. 2007. 'Norway: Selected Issues'. IMF Country Report No. 07/197. Washington, D.C.: IMF.

Impavido, Gregorio. 2002. 'Governance of Public Pension Fund Management: Preliminary Considerations', in Robert Litan, Michael Pomerleano and V. Sundarajan eds.: *Financial Sector Governance: The Role of Public and Private Sectors.* Washington, DC: Brookings Press.

Impavido, Gregorio. 2007. 'Governance of Public Pension Plans: The Importance of Residual Claimants', in John Piggott, Michael Orszag and John Evanns (eds): *Pension Fund Governance: a Global Perspective on Financial Regulation.* Sydney: Elgar.

Kjaer, Knut. 2004. 'The Norwegian Petroleum Fund', in Alberto R. Musalem and Robert J.Palacios (eds) *Public Pension Fund Management*, Proceedings of the Second Public Pension Fund Management Conference in May 2003. Washington D.C.: The World Bank.

Maher, Anne. 2004. 'Public Pension Funds Accountability: The Case of Ireland', in Alberto R. Musalem and Robert J.Palacios (eds) *Public Pension Fund Management*, Proceedings of the Second Public Pension Fund Management Conference in May 2003. Washington D.C.: The World Bank.

MacNaughton, John A. 2004. 'The Canadian Experience on Governance, Accountability and Investment', in Alberto R. Musalem and Robert J.Palacios (eds) *Public Pension Fund Management*, Proceedings of the Second Public Pension Fund Management Conference in May 2003. Washington D.C.: The World Bank.

McCulloch, Brian and Jane Frances.2004. ‘Governance of Public Pension Funds: New Zealand Superannuation Fund’ in Alberto R. Musalem and Robert J.Palacios (eds) *Public Pension Fund Management*, Proceedings of the Second Public Pension Fund Management Conference in May 2003. Washington D.C.: The World Bank.

Mitchell, Olivia S., and Ping-Lung Hsin. 1997. ‘Public Sector Pension Governance and Performance’, in Salvador Valdés-Prieto (ed) *The Economics of Pensions: Principles, Policies and International Experience.* Cambridge, Mass.: Cambridge University Press.

MOF. 2007. White Paper on the Government Pension Fund: Laying the Foundation for Good and Sustainable Returns. Press Release No. 26/2007. Oslo: Ministry of Finance.

Norges Bank and NBIM. 1999-2006. Annual Reports.

NPRF. 2001-2006. Annual Reports.

NZSF. 2003-2006. Annual Reports.

Palacios, Robert. 2002. ‘Managing Public Pension Reserves: Lessons from Five Recent OECD Initiatives’, Social Protection Discussion Paper Series No. 0219. Washington DC: World Bank.

Robalino, David. 2005. *Pensions in the Middle East and North Africa: Time for a Change.* Washington DC: World Bank.

Useem, Michael, and Olivia S. Mitchell. 2000. ‘Holders of the Purse Strings: Governance and Performance of Public Retirement Systems’, *Social Science Quarterly* 81(2):489–506.

Vittas, Dimitri. 2007. A Short Note on the ATP Fund of Denmark. Mimeo. Washington D. C.: World Bank.

World Bank. 1994. *Averting the Old Age Crisis: Policies to Protect the Old and Promote Growth.* Washington D.C.: World Bank.